# Appendices for IM Completion Reports: SWMUs 51, SWMU 39, and FLFA

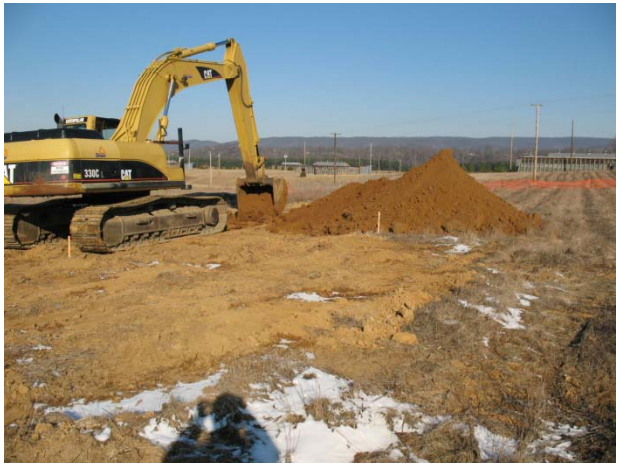
# SWMU 51 IM Completion Report Appendices

# Appendix A

## Photo Log

# Soil Excavation & Loading








# Soil Sampling









# Site Restoration









# Appendix B

IM Data

# Appendix B-1

# Laboratory Data

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name |
|---|---|---|---|---|---|
| RFAAP | SWMU51 | JWB-GF01 | 0.0 | 0.5 | TAWS |

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|---|---|---|---|---|---|
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| 02/16/09 | 02/17/09 | 02/19/09 | 02/20/09 | 99-08-1 |
| 02/16/09 | 02/17/09 | 02/19/09 | 02/20/09 | 99-99-0 |
| 02/16/09 | 02/17/09 | 02/19/09 | 02/20/09 | 19406-51-0 |
| 02/16/09 | 02/17/09 | 02/19/09 | 02/20/09 | 35572-78-2 |
| 02/16/09 | 02/17/09 | 02/19/09 | 02/20/09 | 610-39-9 |
| 02/16/09 | 02/17/09 | 02/19/09 | 02/20/09 | 78-11-5 |

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|---|---|---|---|---|
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 10061-02-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 67-64-1 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 100-41-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 591-78-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-09-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 71-43-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 100-42-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 79-34-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 127-18-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 108-88-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 71-55-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 79-00-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 79-01-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-01-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 95-47-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 136777-61-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-27-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 78-93-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 108-10-1 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-25-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 74-83-9 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-15-0 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 56-23-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 108-90-7 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 124-48-1 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-00-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 67-66-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 74-87-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-34-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 107-06-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-35-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 156-59-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 156-60-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 78-87-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 10061-01-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 10061-02-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 67-64-1 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 100-41-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 591-78-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-09-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 71-43-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 100-42-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 79-34-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 127-18-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 108-88-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 71-55-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 79-00-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 79-01-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-01-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 95-47-6 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 136777-61-2 |

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|---|---|---|---|---|
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-27-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 78-93-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 108-10-1 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-25-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 74-83-9 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-15-0 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 56-23-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 108-90-7 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 124-48-1 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-00-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 67-66-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 74-87-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-34-3 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 107-06-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 75-35-4 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 156-59-2 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 156-60-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 78-87-5 |
| 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 | 10061-01-5 |

| Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|
| Percent Moisture | 21.3 | | |
| Mercury | 0.11 | | |
| Aroclor 1016 | 42 | U | |
| Aroclor 1221 | 42 | U | |
| Aroclor 1232 | 42 | U | |
| Aroclor 1242 | 42 | U | |
| Aroclor 1248 | 42 | U | |
| Aroclor 1254 | 42 | U | |
| Aroclor 1260 | 42 | U | |
| Dieldrin | 4.3 | U | |
| Endosulfan I | 2.2 | U | |
| Endosulfan II | 4.3 | U | |
| Endosulfan sulfate | 4.3 | U | |
| Endrin | 4.3 | U | |
| Endrin aldehyde | 4.3 | U | |
| Endrin ketone | 4.3 | U | |
| Heptachlor | 2.2 | U | |
| Heptachlor epoxide | 2.2 | U | |
| Methoxychlor | 22 | U | |
| alpha-BHC | 2.2 | U | |
| beta-BHC | 2.2 | U | |
| delta-BHC | 2.2 | U | |
| gamma-BHC (Lindane) | 2.2 | U | |
| Toxaphene | 85 | U | |
| alpha-Chlordane | 2.2 | U | |
| gamma-Chlordane | 2.2 | U | |
| Aldrin | 2.2 | U | |
| 4,4'-DDD | 4.3 | U | |
| 4,4'-DDE | 4.3 | U | |
| 4,4'-DDT | 4.3 | U | |
| trans-1,3-Dichloropropene | 7.6 | U | |
| Acetone | 55 | | |
| Ethylbenzene | 7.6 | U | |
| 2-Hexanone | 15 | U | |
| Methylene chloride | 7.6 | U | |
| Benzene | 7.6 | U | |
| Styrene | 7.6 | U | |
| 1,1,2,2-Tetrachloroethane | 7.6 | U | |
| Tetrachloroethene | 7.6 | U | |
| Toluene | 7.6 | U | |
| 1,1,1-Trichloroethane | 7.6 | U | |
| 1,1,2-Trichloroethane | 7.6 | U | |
| Trichloroethene | 7.6 | U | |
| Vinyl chloride | 7.6 | U | |
| o-Xylene | 7.6 | U | |
| m-Xylene & p-Xylene | 7.6 | U | |
| Bromodichloromethane | 7.6 | U | |
| 2-Butanone (MEK) | 5.7 | J | J |
| 4-Methyl-2-pentanone (MIBK) | 15 | U | |
| Bromoform | 7.6 | U | |

| | | | |
|---|---|---|---|
| Bromomethane | 7.6 | U | |
| Carbon disulfide | 15 | U | |
| Carbon tetrachloride | 7.6 | U | |
| Chlorobenzene | 4.0 | J | J |
| Dibromochloromethane | 7.6 | U | |
| Chloroethane | 7.6 | U | |
| Chloroform | 7.6 | U | |
| Chloromethane | 7.6 | U | |
| 1,1-Dichloroethane | 7.6 | U | |
| 1,2-Dichloroethane | 7.6 | U | |
| 1,1-Dichloroethene | 1.1 | J | J |
| cis-1,2-Dichloroethene | 7.6 | U | |
| trans-1,2-Dichloroethene | 7.6 | U | |
| 1,2-Dichloropropane | 7.6 | U | |
| cis-1,3-Dichloropropene | 7.6 | U | |
| Acenaphthene | 420 | U | |
| Diethyl phthalate | 420 | U | |
| 2,4-Dimethylphenol | 640 | U | |
| Dimethyl phthalate | 420 | U | |
| Di-n-octyl phthalate | 420 | U | |
| 4,6-Dinitro-2-methylphenol | 2600 | U | |
| 2,4-Dinitrophenol | 2600 | U | |
| 2,4-Dinitrotoluene | 420 | U | |
| 2,6-Dinitrotoluene | 420 | U | |
| Anthracene | 420 | U | |
| Fluoranthene | 420 | U | |
| Fluorene | 420 | U | |
| 2-Fluorobiphenyl | 1500 | | |
| 2-Fluorophenol | 2300 | | |
| Hexachlorobenzene | 420 | U | |
| Hexachlorobutadiene | 420 | U | |
| Hexachlorocyclopentadiene | 2100 | U | |
| Hexachloroethane | 420 | U | |
| Indeno(1,2,3-cd)pyrene | 420 | U | |
| Isophorone | 420 | U | |
| 2-Methylnaphthalene | 420 | U | |
| 2-Methylphenol | 420 | U | |
| Naphthalene | 420 | U | |
| 2-Nitroaniline | 2100 | U | |
| 3-Nitroaniline | 2100 | U | |
| 4-Nitroaniline | 2100 | U | |
| Nitrobenzene | 420 | U | |
| 2-Nitrophenol | 420 | U | |
| 4-Nitrophenol | 2600 | U | |
| N-Nitrosodi-n-propylamine | 420 | U | |
| N-Nitrosodiphenylamine | 420 | U | |
| Benzo(b)fluoranthene | 420 | U | |
| Benzo(k)fluoranthene | 420 | U | |
| Benzoic acid | 2100 | U | |
| Benzo(ghi)perylene | 420 | U | |
| Benzo(a)pyrene | 420 | U | |

| | | | |
|---|---|---|---|
| Pentachlorophenol | 2600 | U | |
| Benzyl alcohol | 650 | U | |
| Phenanthrene | 420 | U | |
| Phenol | 420 | U | |
| Pyrene | 420 | U | |
| 2,4,6-Tribromophenol | 2400 | | |
| 1,2,4-Trichlorobenzene | 420 | U | |
| 2,4,5-Trichlorophenol | 420 | U | |
| 2,4,6-Trichlorophenol | 420 | U | |
| Nitrobenzene-d5 | 1400 | | |
| Phenol-d5 | 2200 | | |
| Terphenyl-d14 | 1600 | | |
| Carbazole | 420 | U | |
| 3-Methylphenol & 4-Methylphenol | 1300 | U | |
| 2-Chlorophenol-d4 | 2100 | | |
| 1,2-Dichlorobenzene-d4 | 1400 | | |
| bis(2-Chloroethoxy)methane | 420 | U | |
| bis(2-Chloroethyl) ether | 420 | U | |
| bis(2-Chloroisopropyl) ether | 420 | U | |
| bis(2-Ethylhexyl) phthalate | 420 | U | |
| 4-Bromophenyl phenyl ether | 420 | U | |
| Benz(a)anthracene | 420 | U | |
| Butyl benzyl phthalate | 420 | U | |
| Acenaphthylene | 420 | U | |
| 4-Chloroaniline | 420 | U | |
| 4-Chloro-3-methylphenol | 420 | U | |
| 2-Chloronaphthalene | 420 | U | |
| 2-Chlorophenol | 420 | U | |
| 4-Chlorophenyl phenyl ether | 420 | U | |
| Chrysene | 420 | U | |
| Dibenz(a,h)anthracene | 420 | U | |
| Dibenzofuran | 420 | U | |
| Di-n-butyl phthalate | 420 | U | |
| 1,2-Dichlorobenzene | 420 | U | |
| 1,3-Dichlorobenzene | 420 | U | |
| 1,4-Dichlorobenzene | 420 | U | |
| 3,3'-Dichlorobenzidine | 2100 | U | |
| 2,4-Dichlorophenol | 420 | U | |
| Antimony | 1.9 | U | UL |
| Arsenic | 8.9 | | L |
| Iron | 37000 | | |
| Lead | 15.9 | | L |
| Magnesium | 8580 | | K |
| Manganese | 342 | | |
| Barium | 36.9 | | L |
| Nickel | 18.2 | | L |
| Potassium | 3300 | | |
| Beryllium | 1.3 | | |
| Selenium | 2.5 | U | UL |
| Silver | 0.64 | U | UL |
| Sodium | 40 | B | J |

| | | | |
|---|---|---|---|
| Thallium | 2.5 | U | UL |
| Vanadium | 72.1 | | L |
| Zinc | 46.7 | | L |
| Chromium | 41.6 | | L |
| Cadmium | 0.13 | B | L |
| Calcium | 2000 | | L |
| Cobalt | 11.9 | | J |
| Copper | 20.1 | | L |
| Aluminum | 33900 | | |
| 1,3-Dinitrobenzene | 0.25 | U | |
| 2,4-Dinitrotoluene | 0.098 | J | J |
| 2,6-Dinitrotoluene | 0.018 | J | J |
| Nitrobenzene | 0.25 | U | |
| Nitroglycerin | 0.50 | U | |
| 1,3,5-Trinitrobenzene | 0.25 | U | |
| 2,4,6-Trinitrotoluene | 0.042 | J | J |
| HMX | 0.25 | U | |
| RDX | 0.25 | U | |
| Tetryl | 0.25 | U | |
| 2-Nitrotoluene | 0.25 | U | |
| 3-Nitrotoluene | 0.25 | U | |
| 4-Nitrotoluene | 0.50 | U | |
| 4-Amino-2,6-dinitrotoluene | 0.25 | U | |
| 2-Amino-4,6-dinitrotoluene | 0.25 | U | |
| 3,4-Dinitrotoluene | 0.49 | | |
| PETN | 0.50 | U | |
| Percent Moisture | 12.8 | | |
| Mercury | 0.039 | B | J |
| Aroclor 1016 | 38 | U | |
| Aroclor 1221 | 38 | U | |
| Aroclor 1232 | 38 | U | |
| Aroclor 1242 | 38 | U | |
| Aroclor 1248 | 38 | U | |
| Aroclor 1254 | 38 | U | |
| Aroclor 1260 | 38 | U | |
| Dieldrin | 3.9 | U | |
| Endosulfan I | 2.0 | U | |
| Endosulfan II | 3.9 | U | |
| Endosulfan sulfate | 3.9 | U | |
| Endrin | 3.9 | U | |
| Endrin aldehyde | 3.9 | U | |
| Endrin ketone | 3.9 | U | |
| Heptachlor | 2.0 | U | |
| Heptachlor epoxide | 2.0 | U | |
| Methoxychlor | 20 | U | |
| alpha-BHC | 2.0 | U | |
| beta-BHC | 2.0 | U | |
| delta-BHC | 2.0 | U | |
| gamma-BHC (Lindane) | 2.0 | U | |
| Toxaphene | 78 | U | |
| alpha-Chlordane | 2.0 | U | |

| | | | |
|---|---|---|---|
| gamma-Chlordane | 2.0 | U | |
| Aldrin | 2.0 | U | |
| 4,4'-DDD | 3.9 | U | |
| 4,4'-DDE | 3.9 | U | |
| 4,4'-DDT | 3.9 | U | |
| Acetone | 140 | J B | B |
| trans-1,3-Dichloropropene | 6.8 | U | |
| Ethylbenzene | 6.8 | U | |
| 2-Hexanone | 1.1 | J | J |
| Methylene chloride | 6.8 | U | |
| Benzene | 6.8 | U | |
| Styrene | 6.8 | U | |
| 1,1,2,2-Tetrachloroethane | 6.8 | U | |
| Tetrachloroethene | 6.8 | U | |
| Toluene | 6.8 | U | |
| 1,1,1-Trichloroethane | 6.8 | U | |
| 1,1,2-Trichloroethane | 6.8 | U | |
| Trichloroethene | 6.8 | U | |
| Vinyl chloride | 6.8 | U | |
| o-Xylene | 6.8 | U | |
| m-Xylene & p-Xylene | 6.8 | U | |
| Bromodichloromethane | 6.8 | U | |
| 2-Butanone (MEK) | 43 | | |
| 4-Methyl-2-pentanone (MIBK) | 14 | U | |
| Bromoform | 6.8 | U | |
| Bromomethane | 6.8 | U | |
| Carbon disulfide | 14 | U | |
| Carbon tetrachloride | 6.8 | U | |
| Chlorobenzene | 0.90 | J | J |
| Dibromochloromethane | 6.8 | U | |
| Chloroethane | 6.8 | U | |
| Chloroform | 6.8 | U | |
| Chloromethane | 6.8 | U | |
| 1,1-Dichloroethane | 6.8 | U | |
| 1,2-Dichloroethane | 6.8 | U | |
| 1,1-Dichloroethene | 6.8 | U | |
| cis-1,2-Dichloroethene | 6.8 | U | |
| trans-1,2-Dichloroethene | 6.8 | U | |
| 1,2-Dichloropropane | 6.8 | U | |
| cis-1,3-Dichloropropene | 6.8 | U | |
| Acenaphthene | 380 | U | |
| Diethyl phthalate | 380 | U | |
| 2,4-Dimethylphenol | 580 | U | |
| Dimethyl phthalate | 380 | U | |
| Di-n-octyl phthalate | 380 | U | |
| 4,6-Dinitro-2-methylphenol | 2300 | U | |
| 2,4-Dinitrophenol | 2300 | U | |
| 2,4-Dinitrotoluene | 110 | J | J |
| 2,6-Dinitrotoluene | 380 | U | |
| Anthracene | 380 | U | |
| Fluoranthene | 380 | U | |

| | | |
|---|---|---|
| Fluorene | 380 | U |
| 2-Fluorobiphenyl | 1300 | |
| 2-Fluorophenol | 2000 | |
| Hexachlorobenzene | 380 | U |
| Hexachlorobutadiene | 380 | U |
| Hexachlorocyclopentadiene | 1900 | U |
| Hexachloroethane | 380 | U |
| Indeno(1,2,3-cd)pyrene | 380 | U |
| Isophorone | 380 | U |
| 2-Methylnaphthalene | 380 | U |
| 2-Methylphenol | 380 | U |
| Naphthalene | 380 | U |
| 2-Nitroaniline | 1900 | U |
| 3-Nitroaniline | 1900 | U |
| 4-Nitroaniline | 1900 | U |
| Nitrobenzene | 380 | U |
| 2-Nitrophenol | 380 | U |
| 4-Nitrophenol | 2300 | U |
| N-Nitrosodi-n-propylamine | 380 | U |
| N-Nitrosodiphenylamine | 380 | U |
| Benzo(b)fluoranthene | 380 | U |
| Benzo(k)fluoranthene | 380 | U |
| Benzoic acid | 1900 | U |
| Benzo(ghi)perylene | 380 | U |
| Benzo(a)pyrene | 380 | U |
| Pentachlorophenol | 2300 | U |
| Benzyl alcohol | 590 | U |
| Phenanthrene | 380 | U |
| Phenol | 380 | U |
| Pyrene | 380 | U |
| 2,4,6-Tribromophenol | 2600 | |
| 1,2,4-Trichlorobenzene | 380 | U |
| 2,4,5-Trichlorophenol | 380 | U |
| 2,4,6-Trichlorophenol | 380 | U |
| Nitrobenzene-d5 | 1100 | |
| Phenol-d5 | 2100 | |
| Terphenyl-d14 | 1700 | |
| Carbazole | 380 | U |
| 3-Methylphenol & 4-Methylphenol | 1200 | U |
| 2-Chlorophenol-d4 | 2000 | |
| 1,2-Dichlorobenzene-d4 | 1200 | |
| bis(2-Chloroethoxy)methane | 380 | U |
| bis(2-Chloroethyl) ether | 380 | U |
| bis(2-Chloroisopropyl) ether | 380 | U |
| bis(2-Ethylhexyl) phthalate | 380 | U |
| 4-Bromophenyl phenyl ether | 380 | U |
| Benz(a)anthracene | 380 | U |
| Butyl benzyl phthalate | 380 | U |
| Acenaphthylene | 380 | U |
| 4-Chloroaniline | 380 | U |
| 4-Chloro-3-methylphenol | 380 | U |

| | | | |
|---|---|---|---|
| 2-Chloronaphthalene | 380 | U | |
| 2-Chlorophenol | 380 | U | |
| 4-Chlorophenyl phenyl ether | 380 | U | |
| Chrysene | 380 | U | |
| Dibenz(a,h)anthracene | 380 | U | |
| Dibenzofuran | 380 | U | |
| Di-n-butyl phthalate | 380 | U | |
| 1,2-Dichlorobenzene | 380 | U | |
| 1,3-Dichlorobenzene | 380 | U | |
| 1,4-Dichlorobenzene | 380 | U | |
| 3,3'-Dichlorobenzidine | 1900 | U | |
| 2,4-Dichlorophenol | 380 | U | |
| Antimony | 1.7 | U | UL |
| Arsenic | 8.5 | | L |
| Iron | 44100 | | |
| Lead | 20.3 | | L |
| Magnesium | 4230 | | K |
| Manganese | 1260 | | |
| Barium | 44.7 | | L |
| Nickel | 9.0 | | L |
| Potassium | 1060 | | |
| Beryllium | 0.94 | | |
| Selenium | 2.3 | U | UL |
| Silver | 0.57 | U | UL |
| Sodium | 573 | U | |
| Thallium | 0.61 | B | L |
| Vanadium | 94.6 | | L |
| Zinc | 27.2 | | L |
| Chromium | 35.5 | | L |
| Cadmium | 0.16 | B | L |
| Calcium | 617 | | L |
| Cobalt | 15.5 | | J |
| Copper | 8.8 | | L |
| Aluminum | 14500 | | |
| 1,3-Dinitrobenzene | 0.25 | U | |
| 2,4-Dinitrotoluene | 0.28 | | |
| 2,6-Dinitrotoluene | 0.060 | J | J |
| Nitrobenzene | 0.25 | U | |
| Nitroglycerin | 0.50 | U | |
| 1,3,5-Trinitrobenzene | 0.25 | U | |
| 2,4,6-Trinitrotoluene | 0.36 | | |
| HMX | 0.25 | U | |
| RDX | 0.25 | U | |
| Tetryl | 0.25 | U | |
| 2-Nitrotoluene | 0.25 | U | |
| 3-Nitrotoluene | 0.25 | U | |
| 4-Nitrotoluene | 0.50 | U | |
| 4-Amino-2,6-dinitrotoluene | 0.013 | J | J |
| 2-Amino-4,6-dinitrotoluene | 0.25 | U | |
| 3,4-Dinitrotoluene | 0.48 | | |
| PETN | 0.50 | U | |

| | | | |
|---|---|---|---|
| trans-1,3-Dichloropropene | 5.6 | U | |
| Acetone | 160 | | |
| Ethylbenzene | 5.6 | U | |
| 2-Hexanone | 11 | U | |
| Methylene chloride | 5.6 | U | |
| Benzene | 5.6 | U | |
| Styrene | 5.6 | U | |
| 1,1,2,2-Tetrachloroethane | 5.6 | U | |
| Tetrachloroethene | 5.6 | U | |
| Toluene | 5.6 | U | |
| 1,1,1-Trichloroethane | 5.6 | U | |
| 1,1,2-Trichloroethane | 5.6 | U | |
| Trichloroethene | 5.6 | U | |
| Vinyl chloride | 5.6 | U | |
| o-Xylene | 5.6 | U | |
| m-Xylene & p-Xylene | 5.6 | U | |
| Bromodichloromethane | 5.6 | U | |
| 2-Butanone (MEK) | 8.8 | J | J |
| 4-Methyl-2-pentanone (MIBK) | 11 | U | |
| Bromoform | 5.6 | U | |
| Bromomethane | 5.6 | U | |
| Carbon disulfide | 11 | U | |
| Carbon tetrachloride | 5.6 | U | |
| Chlorobenzene | 0.81 | J | J |
| Dibromochloromethane | 5.6 | U | |
| Chloroethane | 5.6 | U | |
| Chloroform | 5.6 | U | |
| Chloromethane | 5.6 | U | |
| 1,1-Dichloroethane | 5.6 | U | |
| 1,2-Dichloroethane | 5.6 | U | |
| 1,1-Dichloroethene | 5.6 | U | |
| cis-1,2-Dichloroethene | 5.6 | U | |
| trans-1,2-Dichloroethene | 5.6 | U | |
| 1,2-Dichloropropane | 5.6 | U | |
| cis-1,3-Dichloropropene | 5.6 | U | |
| trans-1,3-Dichloropropene | 6.6 | U | |
| Acetone | 160 | | |
| Ethylbenzene | 6.6 | U | |
| 2-Hexanone | 13 | U | |
| Methylene chloride | 6.6 | U | |
| Benzene | 6.6 | U | |
| Styrene | 6.6 | U | |
| 1,1,2,2-Tetrachloroethane | 6.6 | U | |
| Tetrachloroethene | 6.6 | U | |
| Toluene | 6.6 | U | |
| 1,1,1-Trichloroethane | 6.6 | U | |
| 1,1,2-Trichloroethane | 6.6 | U | |
| Trichloroethene | 6.6 | U | |
| Vinyl chloride | 6.6 | U | |
| o-Xylene | 6.6 | U | |
| m-Xylene & p-Xylene | 6.6 | U | |

| | | | |
|---|---|---|---|
| Bromodichloromethane | 6.6 | U | |
| 2-Butanone (MEK) | 10 | J | J |
| 4-Methyl-2-pentanone (MIBK) | 13 | U | |
| Bromoform | 6.6 | U | |
| Bromomethane | 6.6 | U | |
| Carbon disulfide | 13 | U | |
| Carbon tetrachloride | 6.6 | U | |
| Chlorobenzene | 0.95 | J | J |
| Dibromochloromethane | 6.6 | U | |
| Chloroethane | 6.6 | U | |
| Chloroform | 6.6 | U | |
| Chloromethane | 6.6 | U | |
| 1,1-Dichloroethane | 6.6 | U | |
| 1,2-Dichloroethane | 6.6 | U | |
| 1,1-Dichloroethene | 6.6 | U | |
| cis-1,2-Dichloroethene | 6.6 | U | |
| trans-1,2-Dichloroethene | 6.6 | U | |
| 1,2-Dichloropropane | 6.6 | U | |
| cis-1,3-Dichloropropene | 6.6 | U | |

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code |
|---|---|---|---|---|---|
| | % | 1 | 0.1 | 0.1 | PP01 |
| | MG/KG | 1 | 0.011 | 0.051 | PP01 |
| U | UG/KG | 1 | 11 | 42 | PP01 |
| U | UG/KG | 1 | 13 | 42 | PP01 |
| U | UG/KG | 1 | 11 | 42 | PP01 |
| U | UG/KG | 1 | 11 | 42 | PP01 |
| U | UG/KG | 1 | 11 | 42 | PP01 |
| U | UG/KG | 1 | 11 | 42 | PP01 |
| U | UG/KG | 1 | 11 | 42 | PP01 |
| U | UG/KG | 1 | 0.41 | 4.3 | PP01 |
| U | UG/KG | 1 | 0.18 | 2.2 | PP01 |
| U | UG/KG | 1 | 0.84 | 4.3 | PP01 |
| U | UG/KG | 1 | 0.28 | 4.3 | PP01 |
| U | UG/KG | 1 | 0.30 | 4.3 | PP01 |
| U | UG/KG | 1 | 0.34 | 4.3 | PP01 |
| U | UG/KG | 1 | 0.43 | 4.3 | PP01 |
| U | UG/KG | 1 | 0.24 | 2.2 | PP01 |
| U | UG/KG | 1 | 0.15 | 2.2 | PP01 |
| U | UG/KG | 1 | 1.7 | 22 | PP01 |
| U | UG/KG | 1 | 0.28 | 2.2 | PP01 |
| U | UG/KG | 1 | 0.42 | 2.2 | PP01 |
| U | UG/KG | 1 | 0.20 | 2.2 | PP01 |
| U | UG/KG | 1 | 0.22 | 2.2 | PP01 |
| U | UG/KG | 1 | 25 | 85 | PP01 |
| U | UG/KG | 1 | 0.25 | 2.2 | PP01 |
| U | UG/KG | 1 | 0.42 | 2.2 | PP01 |
| U | UG/KG | 1 | 0.27 | 2.2 | PP01 |
| U | UG/KG | 1 | 0.33 | 4.3 | PP01 |
| U | UG/KG | 1 | 0.28 | 4.3 | PP01 |
| U | UG/KG | 1 | 0.51 | 4.3 | PP01 |
| U | UG/KG | 1.2 | 1.1 | 7.6 | PP01 |
| | UG/KG | 1.2 | 2.1 | 30 | PP01 |
| U | UG/KG | 1.2 | 0.52 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 1.1 | 15 | PP01 |
| U | UG/KG | 1.2 | 1.3 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.40 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.47 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 1.0 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.93 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.93 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.55 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.67 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.91 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.55 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.50 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 1.2 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.81 | 7.6 | PP01 |
| J | UG/KG | 1.2 | 2.1 | 15 | PP01 |
| U | UG/KG | 1.2 | 1.4 | 15 | PP01 |
| U | UG/KG | 1.2 | 0.61 | 7.6 | PP01 |

| | | | | | |
|---|---|---|---|---|---|
| U | UG/KG | 1.2 | 1.3 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.75 | 15 | PP01 |
| U | UG/KG | 1.2 | 0.81 | 7.6 | PP01 |
| J | UG/KG | 1.2 | 0.44 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.32 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.69 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.40 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.76 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.44 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 1.1 | 7.6 | PP01 |
| J | UG/KG | 1.2 | 0.40 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 1.4 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.58 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.91 | 7.6 | PP01 |
| U | UG/KG | 1.2 | 0.98 | 7.6 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 210 | 640 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 100 | 2600 | PP01 |
| U | UG/KG | 1.01 | 270 | 2600 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 130 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 80 | 2100 | PP01 |
| U | UG/KG | 1.01 | 100 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 74 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 2100 | PP01 |
| U | UG/KG | 1.01 | 210 | 2100 | PP01 |
| U | UG/KG | 1.01 | 110 | 2100 | PP01 |
| U | UG/KG | 1.01 | 97 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 360 | 2600 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 140 | 420 | PP01 |
| U | UG/KG | 1.01 | 370 | 2100 | PP01 |
| U | UG/KG | 1.01 | 140 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |

| | | | | | |
|---|---|---|---|---|---|
| U | UG/KG | 1.01 | 65 | 2600 | PP01 |
| U | UG/KG | 1.01 | 220 | 650 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 420 | 1300 | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 100 | 420 | PP01 |
| U | UG/KG | 1.01 | 100 | 420 | PP01 |
| U | UG/KG | 1.01 | 130 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 74 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 100 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 130 | 420 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 420 | PP01 |
| U | UG/KG | 1.01 | 96 | 420 | PP01 |
| U | UG/KG | 1.01 | 100 | 420 | PP01 |
| U | UG/KG | 1.01 | 99 | 420 | PP01 |
| U | UG/KG | 1.01 | 120 | 2100 | PP01 |
| U | UG/KG | 1.01 | 110 | 420 | PP01 |
| UL | MG/KG | 1 | 0.64 | 1.9 | PP01 |
| L | MG/KG | 1 | 0.89 | 2.7 | PP01 |
| | MG/KG | 1 | 3.9 | 12.7 | PP01 |
| L | MG/KG | 1 | 0.76 | 2.5 | PP01 |
| K | MG/KG | 1 | 9.5 | 63.5 | PP01 |
| | MG/KG | 1 | 0.51 | 1.5 | PP01 |
| L | MG/KG | 1 | 0.51 | 2.5 | PP01 |
| L | MG/KG | 1 | 0.38 | 1.3 | PP01 |
| | MG/KG | 1 | 31.8 | 127 | PP01 |
| | MG/KG | 1 | 0.13 | 0.38 | PP01 |
| UL | MG/KG | 1 | 0.76 | 2.5 | PP01 |
| UL | MG/KG | 1 | 0.13 | 0.64 | PP01 |
| J | MG/KG | 1 | 31.8 | 635 | PP01 |

| | | | | | |
|---|---|---|---|---|---|
| UL | MG/KG | 1 | 0.64 | 2.5 | PP01 |
| L | MG/KG | 1 | 0.38 | 1.3 | PP01 |
| L | MG/KG | 1 | 0.76 | 3.8 | PP01 |
| L | MG/KG | 1 | 0.51 | 1.5 | PP01 |
| L | MG/KG | 1 | 0.13 | 0.38 | PP01 |
| L | MG/KG | 1 | 31.8 | 127 | PP01 |
| J | MG/KG | 1 | 0.25 | 0.76 | PP01 |
| L | MG/KG | 1 | 0.64 | 3.2 | PP01 |
| | MG/KG | 1 | 8.9 | 26.7 | PP01 |
| U | MG/KG | 1 | 0.004 | 0.25 | PP01 |
| J | MG/KG | 1 | 0.005 | 0.25 | PP01 |
| J | MG/KG | 1 | 0.007 | 1.2 | PP01 |
| U | MG/KG | 1 | 0.018 | 0.25 | PP01 |
| U | MG/KG | 1 | 0.015 | 0.50 | PP01 |
| U | MG/KG | 1 | 0.010 | 0.25 | PP01 |
| J | MG/KG | 1 | 0.019 | 0.25 | PP01 |
| U | MG/KG | 1 | 0.012 | 0.25 | PP01 |
| U | MG/KG | 1 | 0.012 | 0.25 | PP01 |
| U | MG/KG | 1 | 0.010 | 0.25 | PP01 |
| U | MG/KG | 1 | 0.013 | 0.25 | PP01 |
| U | MG/KG | 1 | 0.016 | 0.25 | PP01 |
| U | MG/KG | 1 | 0.018 | 0.50 | PP01 |
| U | MG/KG | 1 | 0.010 | 0.25 | PP01 |
| U | MG/KG | 1 | 0.012 | 0.25 | PP01 |
| | MG/KG | 1 | NA | NA | PP01 |
| U | MG/KG | 1 | 0.025 | 0.50 | PP01 |
| | % | 1 | 0.1 | 0.1 | PP01 |
| J | MG/KG | 1 | 0.009 | 0.046 | PP01 |
| U | UG/KG | 1.01 | 9.6 | 38 | PP01 |
| U | UG/KG | 1.01 | 12 | 38 | PP01 |
| U | UG/KG | 1.01 | 9.6 | 38 | PP01 |
| U | UG/KG | 1.01 | 9.6 | 38 | PP01 |
| U | UG/KG | 1.01 | 9.6 | 38 | PP01 |
| U | UG/KG | 1.01 | 9.6 | 38 | PP01 |
| U | UG/KG | 1.01 | 9.6 | 38 | PP01 |
| U | UG/KG | 1.01 | 0.37 | 3.9 | PP01 |
| U | UG/KG | 1.01 | 0.16 | 2.0 | PP01 |
| U | UG/KG | 1.01 | 0.76 | 3.9 | PP01 |
| U | UG/KG | 1.01 | 0.25 | 3.9 | PP01 |
| U | UG/KG | 1.01 | 0.28 | 3.9 | PP01 |
| U | UG/KG | 1.01 | 0.31 | 3.9 | PP01 |
| U | UG/KG | 1.01 | 0.39 | 3.9 | PP01 |
| U | UG/KG | 1.01 | 0.22 | 2.0 | PP01 |
| U | UG/KG | 1.01 | 0.14 | 2.0 | PP01 |
| U | UG/KG | 1.01 | 1.5 | 20 | PP01 |
| U | UG/KG | 1.01 | 0.25 | 2.0 | PP01 |
| U | UG/KG | 1.01 | 0.38 | 2.0 | PP01 |
| U | UG/KG | 1.01 | 0.19 | 2.0 | PP01 |
| U | UG/KG | 1.01 | 0.20 | 2.0 | PP01 |
| U | UG/KG | 1.01 | 23 | 78 | PP01 |
| U | UG/KG | 1.01 | 0.23 | 2.0 | PP01 |

| | | | | | |
|---|---|---|---|---|---|
| U | UG/KG | 1.01 | 0.38 | 2.0 | PP01 |
| U | UG/KG | 1.01 | 0.24 | 2.0 | PP01 |
| U | UG/KG | 1.01 | 0.30 | 3.9 | PP01 |
| U | UG/KG | 1.01 | 0.25 | 3.9 | PP01 |
| U | UG/KG | 1.01 | 0.46 | 3.9 | PP01 |
| B | UG/KG | 1.03 | 59 | 590 | PP01 |
| U | UG/KG | 1.18 | 1.0 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.46 | 6.8 | PP01 |
| J | UG/KG | 1.18 | 1.0 | 14 | PP01 |
| U | UG/KG | 1.18 | 1.1 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.35 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.42 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.92 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.83 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.83 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.49 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.60 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.81 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.49 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.45 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 1.1 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.72 | 6.8 | PP01 |
|  | UG/KG | 1.18 | 1.9 | 14 | PP01 |
| U | UG/KG | 1.18 | 1.2 | 14 | PP01 |
| U | UG/KG | 1.18 | 0.54 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 1.2 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.66 | 14 | PP01 |
| U | UG/KG | 1.18 | 0.72 | 6.8 | PP01 |
| J | UG/KG | 1.18 | 0.39 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.28 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.61 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.35 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.68 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.39 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.99 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.35 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 1.2 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.51 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.81 | 6.8 | PP01 |
| U | UG/KG | 1.18 | 0.87 | 6.8 | PP01 |
| U | UG/KG | 1.01 | 96 | 380 | PP01 |
| U | UG/KG | 1.01 | 100 | 380 | PP01 |
| U | UG/KG | 1.01 | 190 | 580 | PP01 |
| U | UG/KG | 1.01 | 100 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 94 | 2300 | PP01 |
| U | UG/KG | 1.01 | 250 | 2300 | PP01 |
| J | UG/KG | 1.01 | 100 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 100 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |

| | | | | | |
|---|---|---|---|---|---|
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| U | UG/KG | 1.01 | 100 | 380 | PP01 |
| U | UG/KG | 1.01 | 95 | 380 | PP01 |
| U | UG/KG | 1.01 | 72 | 1900 | PP01 |
| U | UG/KG | 1.01 | 94 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 98 | 380 | PP01 |
| U | UG/KG | 1.01 | 67 | 380 | PP01 |
| U | UG/KG | 1.01 | 95 | 380 | PP01 |
| U | UG/KG | 1.01 | 97 | 1900 | PP01 |
| U | UG/KG | 1.01 | 190 | 1900 | PP01 |
| U | UG/KG | 1.01 | 100 | 1900 | PP01 |
| U | UG/KG | 1.01 | 88 | 380 | PP01 |
| U | UG/KG | 1.01 | 95 | 380 | PP01 |
| U | UG/KG | 1.01 | 320 | 2300 | PP01 |
| U | UG/KG | 1.01 | 97 | 380 | PP01 |
| U | UG/KG | 1.01 | 100 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 130 | 380 | PP01 |
| U | UG/KG | 1.01 | 330 | 1900 | PP01 |
| U | UG/KG | 1.01 | 130 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 59 | 2300 | PP01 |
| U | UG/KG | 1.01 | 200 | 590 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 96 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| U | UG/KG | 1.01 | 96 | 380 | PP01 |
| U | UG/KG | 1.01 | 96 | 380 | PP01 |
| U | UG/KG | 1.01 | 97 | 380 | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 380 | 1200 | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| | UG/KG | 1.01 | NA | NA | PP01 |
| U | UG/KG | 1.01 | 100 | 380 | PP01 |
| U | UG/KG | 1.01 | 94 | 380 | PP01 |
| U | UG/KG | 1.01 | 91 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 98 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 98 | 380 | PP01 |
| U | UG/KG | 1.01 | 67 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |

| | | | | | |
|---|---|---|---|---|---|
| U | UG/KG | 1.01 | 94 | 380 | PP01 |
| U | UG/KG | 1.01 | 100 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 97 | 380 | PP01 |
| U | UG/KG | 1.01 | 120 | 380 | PP01 |
| U | UG/KG | 1.01 | 100 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 380 | PP01 |
| U | UG/KG | 1.01 | 87 | 380 | PP01 |
| U | UG/KG | 1.01 | 90 | 380 | PP01 |
| U | UG/KG | 1.01 | 89 | 380 | PP01 |
| U | UG/KG | 1.01 | 110 | 1900 | PP01 |
| U | UG/KG | 1.01 | 100 | 380 | PP01 |
| UL | MG/KG | 1 | 0.57 | 1.7 | PP01 |
| L | MG/KG | 1 | 0.80 | 2.4 | PP01 |
| | MG/KG | 1 | 3.6 | 11.5 | PP01 |
| L | MG/KG | 1 | 0.69 | 2.3 | PP01 |
| K | MG/KG | 1 | 8.6 | 57.3 | PP01 |
| | MG/KG | 1 | 0.46 | 1.4 | PP01 |
| L | MG/KG | 1 | 0.46 | 2.3 | PP01 |
| L | MG/KG | 1 | 0.34 | 1.1 | PP01 |
| | MG/KG | 1 | 28.7 | 115 | PP01 |
| | MG/KG | 1 | 0.11 | 0.34 | PP01 |
| UL | MG/KG | 1 | 0.69 | 2.3 | PP01 |
| UL | MG/KG | 1 | 0.11 | 0.57 | PP01 |
| U | MG/KG | 1 | 28.7 | 573 | PP01 |
| L | MG/KG | 1 | 0.57 | 2.3 | PP01 |
| L | MG/KG | 1 | 0.34 | 1.1 | PP01 |
| L | MG/KG | 1 | 0.69 | 3.4 | PP01 |
| L | MG/KG | 1 | 0.46 | 1.4 | PP01 |
| L | MG/KG | 1 | 0.11 | 0.34 | PP01 |
| L | MG/KG | 1 | 28.7 | 115 | PP01 |
| J | MG/KG | 1 | 0.23 | 0.69 | PP01 |
| L | MG/KG | 1 | 0.57 | 2.9 | PP01 |
| | MG/KG | 1 | 8.0 | 24.1 | PP01 |
| U | MG/KG | 0.99 | 0.004 | 0.25 | PP01 |
| | MG/KG | 0.99 | 0.005 | 0.25 | PP01 |
| J | MG/KG | 0.99 | 0.007 | 1.2 | PP01 |
| U | MG/KG | 0.99 | 0.017 | 0.25 | PP01 |
| U | MG/KG | 0.99 | 0.015 | 0.50 | PP01 |
| U | MG/KG | 0.99 | 0.009 | 0.25 | PP01 |
| | MG/KG | 0.99 | 0.019 | 0.25 | PP01 |
| U | MG/KG | 0.99 | 0.012 | 0.25 | PP01 |
| U | MG/KG | 0.99 | 0.012 | 0.25 | PP01 |
| U | MG/KG | 0.99 | 0.009 | 0.25 | PP01 |
| U | MG/KG | 0.99 | 0.013 | 0.25 | PP01 |
| U | MG/KG | 0.99 | 0.015 | 0.25 | PP01 |
| U | MG/KG | 0.99 | 0.018 | 0.50 | PP01 |
| J | MG/KG | 0.99 | 0.009 | 0.25 | PP01 |
| U | MG/KG | 0.99 | 0.012 | 0.25 | PP01 |
| | MG/KG | 0.99 | NA | NA | PP01 |
| U | MG/KG | 0.99 | 0.025 | 0.50 | PP01 |

| | | | | | |
|---|---|---|---|---|---|
| U | UG/KG | 1.13 | 0.85 | 5.6 | PP01 |
| | UG/KG | 1.13 | 1.6 | 23 | PP01 |
| U | UG/KG | 1.13 | 0.38 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.84 | 11 | PP01 |
| U | UG/KG | 1.13 | 0.95 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.29 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.35 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.77 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.69 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.69 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.41 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.50 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.68 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.41 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.37 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.92 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.60 | 5.6 | PP01 |
| J | UG/KG | 1.13 | 1.6 | 11 | PP01 |
| U | UG/KG | 1.13 | 1.0 | 11 | PP01 |
| U | UG/KG | 1.13 | 0.45 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.97 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.55 | 11 | PP01 |
| U | UG/KG | 1.13 | 0.60 | 5.6 | PP01 |
| J | UG/KG | 1.13 | 0.33 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.24 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.51 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.29 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.56 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.33 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.82 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.29 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 1.0 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.43 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.68 | 5.6 | PP01 |
| U | UG/KG | 1.13 | 0.72 | 5.6 | PP01 |
| U | UG/KG | 1.31 | 0.98 | 6.6 | PP01 |
| | UG/KG | 1.31 | 1.8 | 26 | PP01 |
| U | UG/KG | 1.31 | 0.45 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.97 | 13 | PP01 |
| U | UG/KG | 1.31 | 1.1 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.34 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.41 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.89 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.80 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.80 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.47 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.58 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.79 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.47 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.43 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 1.1 | 6.6 | PP01 |

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|---|---|---|---|---|---|
| U | UG/KG | 1.31 | 0.69 | 6.6 | PP01 |
| J | UG/KG | 1.31 | 1.8 | 13 | PP01 |
| U | UG/KG | 1.31 | 1.2 | 13 | PP01 |
| U | UG/KG | 1.31 | 0.52 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 1.1 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.64 | 13 | PP01 |
| U | UG/KG | 1.31 | 0.69 | 6.6 | PP01 |
| J | UG/KG | 1.31 | 0.38 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.28 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.59 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.34 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.66 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.38 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.96 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.34 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 1.2 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.50 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.79 | 6.6 | PP01 |
| U | UG/KG | 1.31 | 0.84 | 6.6 | PP01 |

| Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|
| N | T | W | 21 |
| N | T | D | 21 |
| N | T | D | 21 |
| N | T | D

| | | | |
|---|---|---|---|
| N | T | D | 21 |
| N | T | D | 21 |
| N | T | D | 21 |

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|---|---|---|---|
| N | T | D | 21 |
| N | T | D | 21 |
| N | T | D | 21 |
| N | T | D | 21 |
| N | T | D | 21 |
| Y | T | D | 21 |
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| Y | T | D | 21 |
| Y | T | D | 21 |
| Y | T | D | 21 |
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| N | T | D | 21 |
| Y | T | D | 21 |
| Y | T | D | 21 |
| N | T | D | 21 |
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|---|---|---|---|
| N | T | D | 21 |
| N | T | D | 21 |
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| N | T | D | 21 |
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| N | T | W | 21 |
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| Y | T | W | 21 |
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|---|---|---|---|
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| N | T | D | 13 |
| N | T | D | 13 |

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|---|---|---|---|
| N | T | D | 13 |
| N | T | D | 13 |
| N | T | D | 13 |

| | | | |
|---|---|---|---|
| N | T | W | No Sample |
| N | T | W | No Sample |
| N | T | W | No Sample |

| | | | |
|---|---|---|---|
| N | T | W | No Sample |
| N | T | W | No Sample |
| N | T | W | No Sample |
| N | T | W | No Sample |
| N | T | W | No Sample |
| N | T | W | No Sample |
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| N | T | W | No Sample |
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| N | T | W | No Sample |
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| N | T | W | No Sample |
| N | T | W | No Sample |
| N | T | W | No Sample |
| N | T | W | No Sample |
| N | T | W | No Sample |

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU51 | 51DW05 | NA | NA | TAWS | G9A120120 | 51DW05 | SO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU51 | 51DW05 | NA | NA | TAWS | G9A120120 | 51DW05 | SO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU51 | 51DW06 | NA | NA | TAWS | G9A120120 | 51DW06 | SO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU51 | 51DW06 | NA | NA | TAWS | G9A120120 | 51DW06 | SO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU51 | 51DW05A | NA | NA | TAWS | G9B170156 | 51DW05A | SO |

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9A120120001 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |

| | | | | | | |
|---|---|---|---|---|---|---|
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120001 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |

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|---|---|---|---|---|---|---|
| G9A120120002 | 3550B | 8081A | 01/09/09 | 01/12/09 | 01/12/09 | 01/14/09 |

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|---|---|---|---|---|---|---|
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9A120120002 | 3550B | 8270C | 01/09/09 | 01/12/09 | 01/14/09 | 01/14/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |

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|---|---|---|---|---|---|---|
| G9B170156003 | 5035 | 8260B | 02/16/09 | 02/17/09 | 02/24/09 | 02/24/09 |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 60-57-1 | Dieldrin | 4.1 | U | | U |
| 959-98-8 | Endosulfan I | 2.0 | U | | U |
| 33213-65-9 | Endosulfan II | 4.1 | U | | U |
| 1031-07-8 | Endosulfan sulfate | 4.1 | U | | U |
| 72-20-8 | Endrin | 4.1 | U | | U |
| 7421-93-4 | Endrin aldehyde | 4.1 | U | | U |
| 53494-70-5 | Endrin ketone | 4.1 | U | | U |
| 76-44-8 | Heptachlor | 2.0 | U | | U |
| 1024-57-3 | Heptachlor epoxide | 2.0 | U | | U |
| 72-43-5 | Methoxychlor | 20 | U | | U |
| 319-84-6 | alpha-BHC | 2.0 | U | | U |
| 319-85-7 | beta-BHC | 2.0 | U | | U |
| 319-86-8 | delta-BHC | 2.0 | U | | U |
| 58-89-9 | gamma-BHC (Lindane) | 2.0 | U | | U |
| 8001-35-2 | Toxaphene | 80 | U | | U |
| 5103-71-9 | alpha-Chlordane | 2.0 | U | | U |
| 5103-74-2 | gamma-Chlordane | 2.0 | U | | U |
| 309-00-2 | Aldrin | 2.0 | U | | U |
| 72-54-8 | 4,4'-DDD | 4.1 | U | | U |
| 72-55-9 | 4,4'-DDE | 4.1 | U | | U |
| 50-29-3 | 4,4'-DDT | 4.1 | U | | U |
| 83-32-9 | Acenaphthene | 400 | U | | U |
| 84-66-2 | Diethyl phthalate | 930 | | | |
| 105-67-9 | 2,4-Dimethylphenol | 610 | U | | U |
| 131-11-3 | Dimethyl phthalate | 400 | U | | U |
| 117-84-0 | Di-n-octyl phthalate | 400 | U | | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 2400 | U | | U |
| 51-28-5 | 2,4-Dinitrophenol | 2400 | U | | U |
| 121-14-2 | 2,4-Dinitrotoluene | 150 | J | J | J |
| 606-20-2 | 2,6-Dinitrotoluene | 400 | U | | U |
| 120-12-7 | Anthracene | 400 | U | | U |
| 206-44-0 | Fluoranthene | 400 | U | | U |
| 86-73-7 | Fluorene | 400 | U | | U |
| 118-74-1 | Hexachlorobenzene | 400 | U | | U |
| 87-68-3 | Hexachlorobutadiene | 400 | U | | U |
| 77-47-4 | Hexachlorocyclopentadiene | 1900 | U | | U |
| 67-72-1 | Hexachloroethane | 400 | U | | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 400 | U | | U |
| 78-59-1 | Isophorone | 400 | U | | U |
| 91-57-6 | 2-Methylnaphthalene | 400 | U | | U |
| 95-48-7 | 2-Methylphenol | 400 | U | | U |
| 91-20-3 | Naphthalene | 400 | U | | U |
| 88-74-4 | 2-Nitroaniline | 1900 | U | | U |
| 99-09-2 | 3-Nitroaniline | 1900 | U | | U |
| 100-01-6 | 4-Nitroaniline | 1900 | U | | U |
| 98-95-3 | Nitrobenzene | 400 | U | | U |
| 88-75-5 | 2-Nitrophenol | 400 | U | | U |
| 100-02-7 | 4-Nitrophenol | 2400 | U | | U |
| 621-64-7 | N-Nitrosodi-n-propylamine | 400 | U | | U |
| 86-30-6 | N-Nitrosodiphenylamine | 400 | U | | U |

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|---|---|---|---|---|
| 205-99-2 | Benzo(b)fluoranthene | 400 | U | U |
| 207-08-9 | Benzo(k)fluoranthene | 400 | U | U |
| 65-85-0 | Benzoic acid | 1900 | U | U |
| 191-24-2 | Benzo(ghi)perylene | 400 | U | U |
| 50-32-8 | Benzo(a)pyrene | 400 | U | U |
| 87-86-5 | Pentachlorophenol | 2400 | U | U |
| 100-51-6 | Benzyl alcohol | 620 | U | U |
| 85-01-8 | Phenanthrene | 400 | U | U |
| 108-95-2 | Phenol | 400 | U | U |
| 129-00-0 | Pyrene | 400 | U | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 400 | U | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 400 | U | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 400 | U | U |
| 86-74-8 | Carbazole | 400 | U | U |
| 65794-96-9 | 3-Methylphenol & 4-Methylphenol | 1200 | U | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 400 | U | U |
| 111-44-4 | bis(2-Chloroethyl) ether | 400 | U | U |
| 108-60-1 | bis(2-Chloroisopropyl) ether | 400 | U | U |
| 117-81-7 | bis(2-Ethylhexyl) phthalate | 400 | U | U |
| 101-55-3 | 4-Bromophenyl phenyl ether | 400 | U | U |
| 56-55-3 | Benz(a)anthracene | 400 | U | U |
| 85-68-7 | Butyl benzyl phthalate | 400 | U | U |
| 208-96-8 | Acenaphthylene | 400 | U | U |
| 106-47-8 | 4-Chloroaniline | 400 | U | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 400 | U | U |
| 91-58-7 | 2-Chloronaphthalene | 400 | U | U |
| 95-57-8 | 2-Chlorophenol | 400 | U | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 400 | U | U |
| 218-01-9 | Chrysene | 400 | U | U |
| 53-70-3 | Dibenz(a,h)anthracene | 400 | U | U |
| 132-64-9 | Dibenzofuran | 400 | U | U |
| 84-74-2 | Di-n-butyl phthalate | 400 | U | U |
| 95-50-1 | 1,2-Dichlorobenzene | 400 | U | U |
| 541-73-1 | 1,3-Dichlorobenzene | 400 | U | U |
| 106-46-7 | 1,4-Dichlorobenzene | 400 | U | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1900 | U | U |
| 120-83-2 | 2,4-Dichlorophenol | 400 | U | U |
| 60-57-1 | Dieldrin | 42 | U | U |
| 959-98-8 | Endosulfan I | 21 | U | U |
| 33213-65-9 | Endosulfan II | 42 | U | U |
| 1031-07-8 | Endosulfan sulfate | 42 | U | U |
| 72-20-8 | Endrin | 42 | U | U |
| 7421-93-4 | Endrin aldehyde | 42 | U | U |
| 53494-70-5 | Endrin ketone | 42 | U | U |
| 76-44-8 | Heptachlor | 21 | U | U |
| 1024-57-3 | Heptachlor epoxide | 21 | U | U |
| 72-43-5 | Methoxychlor | 210 | U | U |
| 319-84-6 | alpha-BHC | 21 | U G | U |
| 319-85-7 | beta-BHC | 21 | U | U |
| 319-86-8 | delta-BHC | 21 | U | U |
| 58-89-9 | gamma-BHC (Lindane) | 21 | U | U |

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|---|---|---|---|---|
| 8001-35-2 | Toxaphene | 820 | U | U |
| 5103-71-9 | alpha-Chlordane | 21 | U | U |
| 5103-74-2 | gamma-Chlordane | 21 | U | U |
| 309-00-2 | Aldrin | 21 | U | U |
| 72-54-8 | 4,4'-DDD | 42 | U | U |
| 72-55-9 | 4,4'-DDE | 42 | U | U |
| 50-29-3 | 4,4'-DDT | 42 | U | U |
| 83-32-9 | Acenaphthene | 390 | U | U |
| 84-66-2 | Diethyl phthalate | 1100 | | |
| 105-67-9 | 2,4-Dimethylphenol | 590 | U | U |
| 131-11-3 | Dimethyl phthalate | 390 | U | U |
| 117-84-0 | Di-n-octyl phthalate | 390 | U | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 2400 | U | U |
| 51-28-5 | 2,4-Dinitrophenol | 2400 | U | U |
| 121-14-2 | 2,4-Dinitrotoluene | 390 | U | U |
| 606-20-2 | 2,6-Dinitrotoluene | 390 | U | U |
| 120-12-7 | Anthracene | 390 | U | U |
| 206-44-0 | Fluoranthene | 390 | U | U |
| 86-73-7 | Fluorene | 390 | U | U |
| 118-74-1 | Hexachlorobenzene | 390 | U | U |
| 87-68-3 | Hexachlorobutadiene | 390 | U | U |
| 77-47-4 | Hexachlorocyclopentadiene | 1900 | U | U |
| 67-72-1 | Hexachloroethane | 390 | U | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 390 | U | U |
| 78-59-1 | Isophorone | 390 | U | U |
| 91-57-6 | 2-Methylnaphthalene | 390 | U | U |
| 95-48-7 | 2-Methylphenol | 390 | U | U |
| 91-20-3 | Naphthalene | 390 | U | U |
| 88-74-4 | 2-Nitroaniline | 1900 | U | U |
| 99-09-2 | 3-Nitroaniline | 1900 | U | U |
| 100-01-6 | 4-Nitroaniline | 1900 | U | U |
| 98-95-3 | Nitrobenzene | 390 | U | U |
| 88-75-5 | 2-Nitrophenol | 390 | U | U |
| 100-02-7 | 4-Nitrophenol | 2400 | U | U |
| 621-64-7 | N-Nitrosodi-n-propylamine | 390 | U | U |
| 86-30-6 | N-Nitrosodiphenylamine | 390 | U | U |
| 205-99-2 | Benzo(b)fluoranthene | 390 | U | U |
| 207-08-9 | Benzo(k)fluoranthene | 390 | U | U |
| 65-85-0 | Benzoic acid | 1900 | U | U |
| 191-24-2 | Benzo(ghi)perylene | 390 | U | U |
| 50-32-8 | Benzo(a)pyrene | 390 | U | U |
| 87-86-5 | Pentachlorophenol | 2400 | U | U |
| 100-51-6 | Benzyl alcohol | 600 | U | U |
| 85-01-8 | Phenanthrene | 390 | U | U |
| 108-95-2 | Phenol | 390 | U | U |
| 129-00-0 | Pyrene | 390 | U | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 390 | U | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 390 | U | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 390 | U | U |
| 86-74-8 | Carbazole | 390 | U | U |
| 65794-96-9 | 3-Methylphenol & 4-Methylphenol | 1200 | U | U |

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|---|---|---|---|---|---|
| 111-91-1 | bis(2-Chloroethoxy)methane | 390 | U | | U |
| 111-44-4 | bis(2-Chloroethyl) ether | 390 | U | | U |
| 108-60-1 | bis(2-Chloroisopropyl) ether | 390 | U | | U |
| 117-81-7 | bis(2-Ethylhexyl) phthalate | 390 | U | | U |
| 101-55-3 | 4-Bromophenyl phenyl ether | 390 | U | | U |
| 56-55-3 | Benz(a)anthracene | 390 | U | | U |
| 85-68-7 | Butyl benzyl phthalate | 390 | U | | U |
| 208-96-8 | Acenaphthylene | 390 | U | | U |
| 106-47-8 | 4-Chloroaniline | 390 | U | | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 390 | U | | U |
| 91-58-7 | 2-Chloronaphthalene | 390 | U | | U |
| 95-57-8 | 2-Chlorophenol | 390 | U | | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 390 | U | | U |
| 218-01-9 | Chrysene | 390 | U | | U |
| 53-70-3 | Dibenz(a,h)anthracene | 390 | U | | U |
| 132-64-9 | Dibenzofuran | 390 | U | | U |
| 84-74-2 | Di-n-butyl phthalate | 390 | U | | U |
| 95-50-1 | 1,2-Dichlorobenzene | 390 | U | | U |
| 541-73-1 | 1,3-Dichlorobenzene | 390 | U | | U |
| 106-46-7 | 1,4-Dichlorobenzene | 390 | U | | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1900 | U | UL | UL |
| 120-83-2 | 2,4-Dichlorophenol | 390 | U | | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5.6 | U | | U |
| 67-64-1 | Acetone | 160 | | | |
| 100-41-4 | Ethylbenzene | 5.6 | U | | U |
| 591-78-6 | 2-Hexanone | 11 | U | | U |
| 75-09-2 | Methylene chloride | 5.6 | U | | U |
| 71-43-2 | Benzene | 5.6 | U | | U |
| 100-42-5 | Styrene | 5.6 | U | | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.6 | U | | U |
| 127-18-4 | Tetrachloroethene | 5.6 | U | | U |
| 108-88-3 | Toluene | 5.6 | U | | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.6 | U | | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.6 | U | | U |
| 79-01-6 | Trichloroethene | 5.6 | U | | U |
| 75-01-4 | Vinyl chloride | 5.6 | U | | U |
| 95-47-6 | o-Xylene | 5.6 | U | | U |
| 136777-61-2 | m-Xylene & p-Xylene | 5.6 | U | | U |
| 75-27-4 | Bromodichloromethane | 5.6 | U | | U |
| 78-93-3 | 2-Butanone (MEK) | 8.8 | J | J | J |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 11 | U | | U |
| 75-25-2 | Bromoform | 5.6 | U | | U |
| 74-83-9 | Bromomethane | 5.6 | U | | U |
| 75-15-0 | Carbon disulfide | 11 | U | | U |
| 56-23-5 | Carbon tetrachloride | 5.6 | U | | U |
| 108-90-7 | Chlorobenzene | 0.81 | J | J | J |
| 124-48-1 | Dibromochloromethane | 5.6 | U | | U |
| 75-00-3 | Chloroethane | 5.6 | U | | U |
| 67-66-3 | Chloroform | 5.6 | U | | U |
| 74-87-3 | Chloromethane | 5.6 | U | | U |
| 75-34-3 | 1,1-Dichloroethane | 5.6 | U | | U |

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|---|---|---|---|---|---|
| 107-06-2 | 1,2-Dichloroethane | 5.6 | U | | U |
| 75-35-4 | 1,1-Dichloroethene | 5.6 | U | | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.6 | U | | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.6 | U | | U |
| 78-87-5 | 1,2-Dichloropropane | 5.6 | U | | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.6 | U | | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 6.6 | U | | U |
| 67-64-1 | Acetone | 160 | | | |
| 100-41-4 | Ethylbenzene | 6.6 | U | | U |
| 591-78-6 | 2-Hexanone | 13 | U | | U |
| 75-09-2 | Methylene chloride | 6.6 | U | | U |
| 71-43-2 | Benzene | 6.6 | U | | U |
| 100-42-5 | Styrene | 6.6 | U | | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.6 | U | | U |
| 127-18-4 | Tetrachloroethene | 6.6 | U | | U |
| 108-88-3 | Toluene | 6.6 | U | | U |
| 71-55-6 | 1,1,1-Trichloroethane | 6.6 | U | | U |
| 79-00-5 | 1,1,2-Trichloroethane | 6.6 | U | | U |
| 79-01-6 | Trichloroethene | 6.6 | U | | U |
| 75-01-4 | Vinyl chloride | 6.6 | U | | U |
| 95-47-6 | o-Xylene | 6.6 | U | | U |
| 136777-61-2 | m-Xylene & p-Xylene | 6.6 | U | | U |
| 75-27-4 | Bromodichloromethane | 6.6 | U | | U |
| 78-93-3 | 2-Butanone (MEK) | 10 | J | J | J |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 13 | U | | U |
| 75-25-2 | Bromoform | 6.6 | U | | U |
| 74-83-9 | Bromomethane | 6.6 | U | | U |
| 75-15-0 | Carbon disulfide | 13 | U | | U |
| 56-23-5 | Carbon tetrachloride | 6.6 | U | | U |
| 108-90-7 | Chlorobenzene | 0.95 | J | J | J |
| 124-48-1 | Dibromochloromethane | 6.6 | U | | U |
| 75-00-3 | Chloroethane | 6.6 | U | | U |
| 67-66-3 | Chloroform | 6.6 | U | | U |
| 74-87-3 | Chloromethane | 6.6 | U | | U |
| 75-34-3 | 1,1-Dichloroethane | 6.6 | U | | U |
| 107-06-2 | 1,2-Dichloroethane | 6.6 | U | | U |
| 75-35-4 | 1,1-Dichloroethene | 6.6 | U | | U |
| 156-59-2 | cis-1,2-Dichloroethene | 6.6 | U | | U |
| 156-60-5 | trans-1,2-Dichloroethene | 6.6 | U | | U |
| 78-87-5 | 1,2-Dichloropropane | 6.6 | U | | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 6.6 | U | | U |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 0.99 | 0.38 | 4.1 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.17 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.79 | 4.1 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.26 | 4.1 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.29 | 4.1 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.32 | 4.1 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.41 | 4.1 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.23 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.14 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 1.6 | 20 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.26 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.40 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.19 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.20 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 24 | 80 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.24 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.40 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.25 | 2 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.31 | 4.1 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.26 | 4.1 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 0.48 | 4.1 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 200 | 610 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 98 | 2400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 260 | 2400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 99 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 75 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 98 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 70 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 99 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 200 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 92 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 99 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 340 | 2400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 140 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 350 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 130 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 62 | 2400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 210 | 620 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 400 | 1200 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 98 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 96 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 70 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 98 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 100 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 120 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 91 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 95 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 93 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 110 | 400 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 3.9 | 42 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 1.7 | 21 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 8.1 | 42 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 2.7 | 42 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 2.9 | 42 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 3.3 | 42 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 4.2 | 42 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 2.3 | 21 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 1.5 | 21 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 16 | 210 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 2.7 | 21 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 4.1 | 21 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 2.0 | 21 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 2.1 | 21 | PP01 | N | T | D | 18 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 10.04 | 250 | 820 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 2.5 | 21 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 4.1 | 21 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 2.6 | 21 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 3.2 | 42 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 2.7 | 42 | PP01 | N | T | D | 18 |
| UG/KG | 10.04 | 4.9 | 42 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 98 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 200 | 590 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 120 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 96 | 2400 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 250 | 2400 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 120 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 97 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 74 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 96 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 69 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 97 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 200 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 90 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 97 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 330 | 2400 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 130 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 340 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 130 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 60 | 2400 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 200 | 600 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 98 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 98 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 98 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 390 | 1200 | PP01 | N | T | D | 18 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 96 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 94 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 120 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 69 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 96 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 120 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 100 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 120 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 89 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 93 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 91 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 1900 | PP01 | N | T | D | 18 |
| UG/KG | 0.97 | 110 | 390 | PP01 | N | T | D | 18 |
| UG/KG | 1.13 | 0.85 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 1.6 | 23 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.38 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.84 | 11 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.95 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.29 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.35 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.77 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.69 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.69 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.41 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.50 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.68 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.41 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.37 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.92 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.60 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 1.6 | 11 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 1.0 | 11 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.45 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.97 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.55 | 11 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.60 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.33 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.24 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.51 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.29 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.56 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.33 | 5.6 | PP01 | N | T | W | No Sample |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 1.13 | 0.82 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.29 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 1.0 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.43 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.68 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.13 | 0.72 | 5.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.98 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 1.8 | 26 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.45 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.97 | 13 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 1.1 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.34 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.41 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.89 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.80 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.80 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.47 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.58 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.79 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.47 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.43 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 1.1 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.69 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 1.8 | 13 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 1.2 | 13 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.52 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 1.1 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.64 | 13 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.69 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.38 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.28 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.59 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.34 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.66 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.38 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.96 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.34 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 1.2 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.50 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.79 | 6.6 | PP01 | N | T | W | No Sample |
| UG/KG | 1.31 | 0.84 | 6.6 | PP01 | N | T | W | No Sample |

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
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| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
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| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
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| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
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| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
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| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
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| RFAAP | SWMU 51 | 51SC11 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC11 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC12 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC12 | SB |
| RFAAP | SWMU 51 | 51SC13 | 24.0 | 24.5 | TAWS | G9C050192 | 51SC13 | SB |
| RFAAP | SWMU 51 | 51SC13 | 24.0 | 24.5 | TAWS | G9C050192 | 51SC13 | SB |
| RFAAP | SWMU 51 | 51SC13 | 24.0 | 24.5 | TAWS | G9C050192 | 51SC13 | SB |
| RFAAP | SWMU 51 | 51SC13 | 24.0 | 24.5 | TAWS | G9C050192 | 51SC13 | SB |
| RFAAP | SWMU 51 | 51SC13 | 24.0 | 24.5 | TAWS | G9C050192 | 51SC13 | SB |

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| RFAAP | SWMU 51 | 51SC13 | 24.0 | 24.5 | TAWS | G9C050192 | 51SC13 | SB |
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| RFAAP | SWMU 51 | 51SC13 | 24.0 | 24.5 | TAWS | G9C050192 | 51SC13 | SB |
| RFAAP | SWMU 51 | 51SC13 | 24.0 | 24.5 | TAWS | G9C050192 | 51SC13 | SB |
| RFAAP | SWMU 51 | 51SC13 | 24.0 | 24.5 | TAWS | G9C050192 | 51SC13 | SB |
| RFAAP | SWMU 51 | 51SC14 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC14 | SB |
| RFAAP | SWMU 51 | 51SC14 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC14 | SB |
| RFAAP | SWMU 51 | 51SC14 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC14 | SB |
| RFAAP | SWMU 51 | 51SC14 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC14 | SB |
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| RFAAP | SWMU 51 | 51SC14 | 23.0 | 23.5 | TAWS | G9C050192 | 51SC14 | SB |
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| RFAAP | SWMU51 | 51SC16 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16 | SB |
| RFAAP | SWMU51 | 51SC16 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16 | SB |
| RFAAP | SWMU51 | 51SC16 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16 | SB |
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| RFAAP | SWMU51 | 51SC16 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16 | SB |
| RFAAP | SWMU51 | 51SC16 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16 | SB |
| RFAAP | SWMU51 | 51SC16 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16 | SB |
| RFAAP | SWMU51 | 51SC18 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC18 | SB |
| RFAAP | SWMU51 | 51SC18 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC18 | SB |
| RFAAP | SWMU51 | 51SC18 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC18 | SB |
| RFAAP | SWMU51 | 51SC18 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC18 | SB |
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| RFAAP | SWMU51 | 51SC18 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC18 | SB |
| RFAAP | SWMU51 | 51SC18 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC18 | SB |
| RFAAP | SWMU51 | 51SC18 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC18 | SB |
| RFAAP | SWMU51 | 51SC18 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC18 | SB |
| RFAAP | SWMU51 | 51SC18 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC18 | SB |
| RFAAP | SWMU51 | 51SC20 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC20 | SB |
| RFAAP | SWMU51 | 51SC20 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC20 | SB |
| RFAAP | SWMU51 | 51SC20 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC20 | SB |
| RFAAP | SWMU51 | 51SC20 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC20 | SB |
| RFAAP | SWMU51 | 51SC20 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC20 | SB |
| RFAAP | SWMU51 | 51SC20 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC20 | SB |
| RFAAP | SWMU51 | 51SC20 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC20 | SB |
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| RFAAP | SWMU51 | 51SC16D | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16D | SB |
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| RFAAP | SWMU51 | 51SC16D | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16D | SB |

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| RFAAP | SWMU51 | 51SC16D | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16D | SB |
| RFAAP | SWMU51 | 51SC16D | 23.0 | 23.5 | TAWS | G9C110192 | 51SC16D | SB |
| RFAAP | SWMU51 | 51SC22 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC22 | SB |
| RFAAP | SWMU51 | 51SC22 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC22 | SB |
| RFAAP | SWMU51 | 51SC22 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC22 | SB |
| RFAAP | SWMU51 | 51SC22 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC22 | SB |
| RFAAP | SWMU51 | 51SC22 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC22 | SB |
| RFAAP | SWMU51 | 51SC22 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC22 | SB |
| RFAAP | SWMU51 | 51SC22 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC22 | SB |
| RFAAP | SWMU51 | 51SC22 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC22 | SB |
| RFAAP | SWMU51 | 51SC22 | 23.0 | 23.5 | TAWS | G9C110192 | 51SC22 | SB |
| RFAAP | SWMU 51 | 51SC27 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC27 | SB |
| RFAAP | SWMU 51 | 51SC27 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC27 | SB |
| RFAAP | SWMU 51 | 51SC27 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC27 | SB |
| RFAAP | SWMU 51 | 51SC27 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC27 | SB |
| RFAAP | SWMU 51 | 51SC27 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC27 | SB |
| RFAAP | SWMU 51 | 51SC27 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC27 | SB |
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| RFAAP | SWMU 51 | 51SC27 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC27 | SB |
| RFAAP | SWMU 51 | 51SC28 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC28 | SB |
| RFAAP | SWMU 51 | 51SC28 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC28 | SB |
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| RFAAP | SWMU 51 | 51SC28 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC28 | SB |
| RFAAP | SWMU 51 | 51SC28 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC28 | SB |
| RFAAP | SWMU 51 | 51SC28 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC28 | SB |
| RFAAP | SWMU 51 | 51SC28 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC28 | SB |
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| RFAAP | SWMU 51 | 51SC28 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC28 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC29 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC29 | SB |
| RFAAP | SWMU 51 | 51SC30 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC30 | SB |
| RFAAP | SWMU 51 | 51SC30 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC30 | SB |
| RFAAP | SWMU 51 | 51SC30 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC30 | SB |
| RFAAP | SWMU 51 | 51SC30 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC30 | SB |
| RFAAP | SWMU 51 | 51SC30 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC30 | SB |
| RFAAP | SWMU 51 | 51SC30 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC30 | SB |
| RFAAP | SWMU 51 | 51SC30 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC30 | SB |

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| RFAAP | SWMU 51 | 51SC30 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC30 | SB |
| RFAAP | SWMU 51 | 51SC30 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC30 | SB |
| RFAAP | SWMU 51 | 51SC31 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC31

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| RFAAP | SWMU 51 | 51SC33 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC33 | SB |
| RFAAP | SWMU 51 | 51SC33 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC33 | SB |
| RFAAP | SWMU 51 | 51SC33 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC33 | SB |
| RFAAP | SWMU 51 | 51SC33 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC33 | SB |
| RFAAP | SWMU 51 | 51SC33 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC33 | SB |
| RFAAP | SWMU 51 | 51SC33 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC33 | SB |
| RFAAP | SWMU 51 | 51SC33 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC33 | SB |
| RFAAP | SWMU 51 | 51SC34 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC34 | SB |
| RFAAP | SWMU 51 | 51SC34 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC34 | SB |
| RFAAP | SWMU 51 | 51SC34 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC34 | SB |
| RFAAP | SWMU 51 | 51SC34 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC34 | SB |
| RFAAP | SWMU 51 | 51SC34 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC34 | SB |
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| RFAAP | SWMU 51 | 51SC34 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC34 | SB |
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| RFAAP | SWMU 51 | 51SC34 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC34 | SB |
| RFAAP | SWMU 51 | 51SC34 | 23.0 | 23.5 | TAWS | G9C240231 | 51SC34 | SB |
| RFAAP | SWMU 51 | 51SC35 | 16.0 | 16.5 | TAWS | G9C240231 | 51SC35 | SB |
| RFAAP | SWMU 51 | 51SC35 | 16.0 | 16.5 | TAWS | G9C240231 | 51SC35 | SB |
| RFAAP | SWMU 51 | 51SC35 | 16.0 | 16.5 | TAWS | G9C240231 | 51SC35 | SB |
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| RFAAP | SWMU 51 | 51SC35 | 16.0 | 16.5 | TAWS | G9C240231 | 51SC35 | SB |
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| RFAAP | SWMU 51 | 51SC35 | 16.0 | 16.5 | TAWS | G9C240231 | 51SC35 | SB |
| RFAAP | SWMU 51 | 51SC36 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC36 | SB |
| RFAAP | SWMU 51 | 51SC36 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC36 | SB |
| RFAAP | SWMU 51 | 51SC36 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC36 | SB |
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| RFAAP | SWMU 51 | 51SC36 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC36 | SB |
| RFAAP | SWMU 51 | 51SC36 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC36 | SB |
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| RFAAP | SWMU 51 | 51SC36 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC36 | SB |
| RFAAP | SWMU 51 | 51SC37 | 18.0 | 18.5 | TAWS | G9C240231 | 51SC37 | SB |
| RFAAP | SWMU 51 | 51SC37 | 18.0 | 18.5 | TAWS | G9C240231 | 51SC37 | SB |
| RFAAP | SWMU 51 | 51SC37 | 18.0 | 18.5 | TAWS | G9C240231 | 51SC37 | SB |
| RFAAP | SWMU 51 | 51SC37 | 18.0 | 18.5 | TAWS | G9C240231 | 51SC37 | SB |
| RFAAP | SWMU 51 | 51SC37 | 18.0 | 18.5 | TAWS | G9C240231 | 51SC37 | SB |
| RFAAP | SWMU 51 | 51SC37 | 18.0 | 18.5 | TAWS | G9C240231 | 51SC37 | SB |
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| RFAAP | SWMU 51 | 51SC37 | 18.0 | 18.5 | TAWS | G9C240231 | 51SC37 | SB |
| RFAAP | SWMU 51 | 51SC37 | 18.0 | 18.5 | TAWS | G9C240231 | 51SC37 | SB |
| RFAAP | SWMU 51 | 51SC37 | 18.0 | 18.5 | TAWS | G9C240231 | 51SC37 | SB |
| RFAAP | SWMU 51 | 51SC38 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC38 | SB |
| RFAAP | SWMU 51 | 51SC38 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC38 | SB |
| RFAAP | SWMU 51 | 51SC38 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC38 | SB |
| RFAAP | SWMU 51 | 51SC38 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC38 | SB |

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| RFAAP | SWMU 51 | 51SC41 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC41 | SB |
| RFAAP | SWMU 51 | 51SC41 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC41 | SB |
| RFAAP | SWMU 51 | 51SC41 | 15.0 | 15.5 | TAWS | G9C240231 | 51SC41 | SB |
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| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
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| G9C050192012 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
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| G9C050192012 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
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| G9C050192012DI | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/10/09 |
| G9C050192013 | D2216-90 | D 2216-90 | 03/04/09 | 03/05/09 | 03/06/09 | 03/09/09 |
| G9C050192013 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
| G9C050192013 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
| G9C050192013 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192013 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |

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| G9C050192013DI | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/10/09 |
| G9C050192013DI | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/10/09 |
| G9C050192013DI | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/10/09 |
| G9C050192014 | D2216-90 | D 2216-90 | 03/04/09 | 03/05/09 | 03/06/09 | 03/09/09 |
| G9C050192014 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
| G9C050192014 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
| G9C050192014 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192014 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
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| G9C050192014DI | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/10/09 |
| G9C050192014DI | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/10/09 |
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| G9C110192002 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192002 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
| G9C110192002 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
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| G9C110192002DI | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
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| G9C110192006 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
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| G9C110192015 | D2216-90 | D 2216-90 | 03/10/09 | 03/11/09 | 03/11/09 | 03/12/09 |
| G9C110192015 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
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| G9C110192015DI | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |

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| G9C240231009DI | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231010 | D2216-90 | D 2216-90 | 03/23/09 | 03/24/09 | 03/25/09 | 03/26/09 |
| G9C240231010 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231010 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231010 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231010 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231010 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231010 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231010 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231010DI | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231010DI | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231011 | D2216-90 | D 2216-90 | 03/23/09 | 03/24/09 | 03/25/09 | 03/26/09 |
| G9C240231011 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231011 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231011 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231011 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231011 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231011 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231011 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231011 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231011 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231012 | D2216-90 | D 2216-90 | 03/23/09 | 03/24/09 | 03/25/09 | 03/26/09 |
| G9C240231012 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231012 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231012 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |

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|---|---|---|---|---|---|---|
| G9C240231012 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231012 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231012 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231012 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231012 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231012DI | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/28/09 |
| G9C240231013 | D2216-90 | D 2216-90 | 03/23/09 | 03/24/09 | 03/25/09 | 03/26/09 |
| G9C240231013 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231013 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231013RE | 8330B | 8330 | 03/23/09 | 03/24/09 | 04/03/09 | 04/07/09 |
| G9C240231013RE | 8330B | 8330 | 03/23/09 | 03/24/09 | 04/03/09 | 04/07/09 |
| G9C240231013RE | 8330B | 8330 | 03/23/09 | 03/24/09 | 04/03/09 | 04/07/09 |
| G9C240231013RE | 8330B | 8330 | 03/23/09 | 03/24/09 | 04/03/09 | 04/07/09 |
| G9C240231013RE | 8330B | 8330 | 03/23/09 | 03/24/09 | 04/03/09 | 04/07/09 |
| G9C240231013RE | 8330B | 8330 | 03/23/09 | 03/24/09 | 04/03/09 | 04/07/09 |
| G9C240231013RE | 8330B | 8330 | 03/23/09 | 03/24/09 | 04/03/09 | 04/07/09 |
| G9C240231014 | D2216-90 | D 2216-90 | 03/23/09 | 03/24/09 | 03/25/09 | 03/26/09 |
| G9C240231014 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231014 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231014 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231014 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231014 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231014 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231014 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231014 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231014 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015 | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/27/09 |
| G9C240231015DI | 8290 | 8290 | 03/23/09 | 03/24/09 | 03/26/09 | 03/30/09 |

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|---|---|---|---|---|---|---|
| G9C240231015 | D2216-90 | D 2216-90 | 03/23/09 | 03/24/09 | 03/25/09 | 03/26/09 |
| G9C240231015 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231015 | 3050B | 6010B | 03/23/09 | 03/24/09 | 03/25/09 | 03/25/09 |
| G9C240231015 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231015 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231015 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231015 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231015 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231015 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |
| G9C240231015 | 8330B | 8330 | 03/23/09 | 03/24/09 | 03/25/09 | 03/27/09 |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 51207-31-9 | 2,3,7,8-TCDF | 2.0 | CON | | | PG/G | 1 |
| 57117-41-6 | 1,2,3,7,8-PeCDF | 0.48 | J | J | J | PG/G | 1 |
| 57117-31-4 | 2,3,4,7,8-PeCDF | 0.98 | J JA | J | J | PG/G | 1 |
| 70648-26-9 | 1,2,3,4,7,8-HxCDF | 1.6 | J | J | J | PG/G | 1 |
| 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.25 | J JA | J | J | PG/G | 1 |
| 72918-21-9 | 1,2,3,7,8,9-HxCDF | 6.1 | U | | U | PG/G | 1 |
| 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 6.3 | | | | PG/G | 1 |
| 39001-02-0 | OCDF | 21 | | | | PG/G | 1 |
| 55722-27-5 | Total TCDF | 7.9 | | | | PG/G | 1 |
| 30402-15-4 | Total PeCDF | 3.6 | | | | PG/G | 1 |
| 55684-94-1 | Total HxCDF | 7.3 | | | | PG/G | 1 |
| 38998-75-3 | Total HpCDF | 20 | | | | PG/G | 1 |
| 41903-57-5 | Total TCDD | 1.2 | U | | U | PG/G | 1 |
| 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U | PG/G | 1 |
| 36088-22-9 | Total PeCDD | 6.1 | U | | U | PG/G | 1 |
| 40321-76-4 | 1,2,3,7,8-PeCDD | 6.1 | U | | U | PG/G | 1 |
| 34465-46-8 | Total HxCDD | 7.7 | | | | PG/G | 1 |
| 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.96 | J JA | J | J | PG/G | 1 |
| 37871-00-4 | Total HpCDD | 100 | | | | PG/G | 1 |
| 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 55 | | | | PG/G | 1 |
| 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.45 | J JA | J | J | PG/G | 1 |
| 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.60 | J | J | J | PG/G | 1 |
| 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.45 | J JA | J | J | PG/G | 1 |
| 57653-85-7 | 1,2,3,6,7,8-HxCDD | 1.3 | J | J | J | PG/G | 1 |
| 3268-87-9 | OCDD | 5700 | B | | | PG/G | 10 |
| Q1028 | Percent Moisture | 19.5 | | | | % | 1 |
| 7439-92-1 | Lead | 34.1 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 18200 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 4.3 | | K | K | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 2.0 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.63 | | K | K | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.65 | | K | K | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 11 | | K | K | MG/KG | 1.99 |
| Q1028 | Percent Moisture | 9.2 | | | | % | 1 |
| 7439-92-1 | Lead | 4.9 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 7710 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.034 | J PG | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 4.6 | | K | K | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 4.8 | | K | K | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 29 | | | | MG/KG | 20 |
| 606-20-2 | 2,6-Dinitrotoluene | 12 | J | J | J | MG/KG | 20 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 71 | | | | MG/KG | 20 |
| Q1028 | Percent Moisture | 18.1 | | | | % | 1 |
| 7439-92-1 | Lead | 309 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 15500 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.066 | J PG | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 88-72-2 | 2-Nitrotoluene | 6.9 | | K | K | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 5.5 | | K | K | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 45 | | | | MG/KG | 50 |
| 606-20-2 | 2,6-Dinitrotoluene | 34 | J | J | J | MG/KG | 50 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 230 | | | | MG/KG | 50 |
| Q1028 | Percent Moisture | 19.5 | | | | % | 1 |
| 7439-92-1 | Lead | 86.7 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 15700 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.30 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 480 | | | | MG/KG | 99.5 |
| 606-20-2 | 2,6-Dinitrotoluene | 140 | | | | MG/KG | 99.5 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 500 | | | | MG/KG | 99.5 |
| 88-72-2 | 2-Nitrotoluene | 120 | | | | MG/KG | 99.5 |
| 99-99-0 | 4-Nitrotoluene | 95 | | | | MG/KG | 99.5 |
| Q1028 | Percent Moisture | 16.7 | | | | % | 1 |
| 7439-92-1 | Lead | 46.5 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 16900 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.53 | | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.20 | J | J | J | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 1000 | | J | J | MG/KG | 998 |
| 606-20-2 | 2,6-Dinitrotoluene | 250 | | J | J | MG/KG | 998 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 1900 | | J | J | MG/KG | 998 |
| 88-72-2 | 2-Nitrotoluene | 250 | | J | J | MG/KG | 998 |
| 99-99-0 | 4-Nitrotoluene | 200 | J | J | J | MG/KG | 998 |
| Q1028 | Percent Moisture | 19.0 | | | | % | 1 |
| 7439-92-1 | Lead | 13.9 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 28400 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.31 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.24 | J | J | J | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 640 | | | | MG/KG | 499.5 |
| 606-20-2 | 2,6-Dinitrotoluene | 130 | | | | MG/KG | 499.5 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 1000 | | | | MG/KG | 499.5 |
| 88-72-2 | 2-Nitrotoluene | 73 | J | J | J | MG/KG | 499.5 |
| 99-99-0 | 4-Nitrotoluene | 78 | J | J | J | MG/KG | 499.5 |
| Q1028 | Percent Moisture | 22.7 | | | | % | 1 |
| 7439-92-1 | Lead | 335 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 21300 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.42 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 1.5 | | K | K | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 830 | | | | MG/KG | 498 |
| 606-20-2 | 2,6-Dinitrotoluene | 220 | | | | MG/KG | 498 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 1200 | | | | MG/KG | 498 |
| 88-72-2 | 2-Nitrotoluene | 140 | | | | MG/KG | 498 |
| 99-99-0 | 4-Nitrotoluene | 100 | J | J | J | MG/KG | 498 |
| Q1028 | Percent Moisture | 16.4 | | | | % | 1 |
| 7439-92-1 | Lead | 55.4 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 17700 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.28 | | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 1.2 | | J | J | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 510 | | J | J | MG/KG | 498.5 |

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|---|---|---|---|---|---|---|---|
| 606-20-2 | 2,6-Dinitrotoluene | 140 | | J | J | MG/KG | 498.5 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 880 | | J | J | MG/KG | 498.5 |
| 88-72-2 | 2-Nitrotoluene | 140 | | J | J | MG/KG | 498.5 |
| 99-99-0 | 4-Nitrotoluene | 110 | J | J | J | MG/KG | 498.5 |
| Q1028 | Percent Moisture | 16.3 | | | | % | 1 |
| 7439-92-1 | Lead | 49.6 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 17300 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.44 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 3.5 | | K | K | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 870 | | | | MG/KG | 499.5 |
| 606-20-2 | 2,6-Dinitrotoluene | 250 | | | | MG/KG | 499.5 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 1200 | | | | MG/KG | 499.5 |
| 88-72-2 | 2-Nitrotoluene | 200 | | | | MG/KG | 499.5 |
| 99-99-0 | 4-Nitrotoluene | 110 | J | J | J | MG/KG | 499.5 |
| Q1028 | Percent Moisture | 18.9 | | | | % | 1 |
| 7439-92-1 | Lead | 15.8 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 24500 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 4.4 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.71 | | | | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.40 | J | J | J | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.24 | J | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.30 | J | J | J | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 14 | | | | MG/KG | 5 |
| Q1028 | Percent Moisture | 19.4 | | | | % | 1 |
| 7439-92-1 | Lead | 15.6 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 24600 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 1.0 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.39 | | | | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.17 | J | J | J | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.11 | J | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.12 | J | J | J | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 16 | | | | MG/KG | 5 |
| Q1028 | Percent Moisture | 19.7 | | | | % | 1 |
| 7439-92-1 | Lead | 13.9 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 26600 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 1.0 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.42 | | | | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.17 | J | J | J | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.13 | J | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.14 | J | J | J | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 12 | | | | MG/KG | 5 |
| Q1028 | Percent Moisture | 19.1 | | | | % | 1 |
| 7439-92-1 | Lead | 13.3 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 24600 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 2.8 | | | | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.27 | | | | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.12 | J | J | J | MG/KG | 0.99 |

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|---|---|---|---|---|---|---|---|
| 88-72-2 | 2-Nitrotoluene | 0.095 | J | J | J | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.10 | J | J | J | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 11 | | | | MG/KG | 4.99 |
| 51207-31-9 | 2,3,7,8-TCDF | 1.2 | U | | U | PG/G | 1 |
| 57117-41-6 | 1,2,3,7,8-PeCDF | 0.078 | J | J | J | PG/G | 1 |
| 57117-31-4 | 2,3,4,7,8-PeCDF | 0.087 | J | J | J | PG/G | 1 |
| 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.29 | J | J | J | PG/G | 1 |
| 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.16 | J | J | J | PG/G | 1 |
| 72918-21-9 | 1,2,3,7,8,9-HxCDF | 6.1 | U | | U | PG/G | 1 |
| 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 3.6 | J B | J | J | PG/G | 1 |
| 39001-02-0 | OCDF | 6.4 | J B | J | J | PG/G | 1 |
| 55722-27-5 | Total TCDF | 0.31 | | B | B | PG/G | 1 |
| 30402-15-4 | Total PeCDF | 0.78 | | B | B | PG/G | 1 |
| 55684-94-1 | Total HxCDF | 2.2 | | | | PG/G | 1 |
| 38998-75-3 | Total HpCDF | 8.3 | | | | PG/G | 1 |
| 41903-57-5 | Total TCDD | 0.22 | | B | B | PG/G | 1 |
| 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U | PG/G | 1 |
| 36088-22-9 | Total PeCDD | 0.40 | | | | PG/G | 1 |
| 40321-76-4 | 1,2,3,7,8-PeCDD | 0.24 | J | J | J | PG/G | 1 |
| 34465-46-8 | Total HxCDD | 7.7 | | | | PG/G | 1 |
| 19408-74-3 | 1,2,3,7,8,9-HxCDD | 1.3 | J | J | J | PG/G | 1 |
| 37871-00-4 | Total HpCDD | 160 | | | | PG/G | 1 |
| 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 81 | B | | | PG/G | 1 |
| 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.14 | J | J | J | PG/G | 1 |
| 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.32 | J B | B | B | PG/G | 1 |
| 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.53 | J | J | J | PG/G | 1 |
| 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.87 | J B | J | J | PG/G | 1 |
| 3268-87-9 | OCDD | 6800 | B | | | PG/G | 10 |
| Q1028 | Percent Moisture | 18.5 | | | | % | 1 |
| 7439-92-1 | Lead | 16.1 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 27800 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 1.2 | | | | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.38 | | | | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.096 | J | J | J | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 7.3 | | | | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.22 | J | J | J | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.18 | J | J | J | MG/KG | 0.99 |
| Q1028 | Percent Moisture | 18.3 | | | | % | 1 |
| 7439-92-1 | Lead | 16.4 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 24200 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 1.7 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.60 | | | | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.28 | J | J | J | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.18 | J | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.20 | J | J | J | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 16 | | | | MG/KG | 5 |
| Q1028 | Percent Moisture | 17.4 | | | | % | 1 |
| 7439-92-1 | Lead | 16.5 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 24200 | | | | MG/KG | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 2.8 | | | | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.77 | | | | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.19 | J | J | J | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.28 | | | | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.30 | J | J | J | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 16 | | | | MG/KG | 4.99 |
| Q1028 | Percent Moisture | 18.4 | | | | % | 1 |
| 7439-92-1 | Lead | 16.8 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 22700 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 4.7 | | K | K | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.74 | | K | K | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.19 | J | K | K | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.19 | J | K | K | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.20 | J | K | K | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 14 | | K | K | MG/KG | 5 |
| Q1028 | Percent Moisture | 12.5 | | | | % | 1 |
| 7439-92-1 | Lead | 13.7 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 19000 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 7.0 | | K | K | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 1.3 | | K | K | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.40 | | K | K | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.61 | | K | K | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 11 | | K | K | MG/KG | 5 |
| Q1028 | Percent Moisture | 14.2 | | | | % | 1 |
| 7439-92-1 | Lead | 14.1 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 17500 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 2.6 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.66 | | K | K | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.93 | | K | K | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 15 | | K | K | MG/KG | 4.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 23 | | K | K | MG/KG | 4.99 |
| Q1028 | Percent Moisture | 11.8 | | | | % | 1 |
| 7439-92-1 | Lead | 12.6 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 15500 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 5.0 | | K | K | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 1.2 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 6.4 | | K | K | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.32 | | K | K | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.49 | J | K | K | MG/KG | 0.99 |
| Q1028 | Percent Moisture | 13.5 | | | | % | 1 |
| 7439-92-1 | Lead | 26.4 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 20700 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |

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|---|---|---|---|---|---|---|---|
| 121-14-2 | 2,4-Dinitrotoluene | 3.5 | | | | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.83 | | | | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.85 | | | | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.36 | PG | J | J | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.43 | J PG | J | J | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 11 | | K | K | MG/KG | 4.99 |
| Q1028 | Percent Moisture | 20.4 | | | | % | 1 |
| 7439-92-1 | Lead | 11.8 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 33700 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.070 | J | J | J | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.020 | J | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.10 | J | J | J | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 1 |
| Q1028 | Percent Moisture | 20.5 | | | | % | 1 |
| 7439-92-1 | Lead | 23.6 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 33500 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.70 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.23 | J | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.66 | | | | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.057 | J | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.078 | J | J | J | MG/KG | 1 |
| 51207-31-9 | 2,3,7,8-TCDF | 0.15 | J | J | J | PG/G | 1 |
| 57117-41-6 | 1,2,3,7,8-PeCDF | 6.3 | U | | U | PG/G | 1 |
| 57117-31-4 | 2,3,4,7,8-PeCDF | 0.10 | J | J | J | PG/G | 1 |
| 70648-26-9 | 1,2,3,4,7,8-HxCDF | 6.3 | U | | U | PG/G | 1 |
| 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.097 | J | J | J | PG/G | 1 |
| 72918-21-9 | 1,2,3,7,8,9-HxCDF | 6.3 | U | | U | PG/G | 1 |
| 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.43 | J B | B | B | PG/G | 1 |
| 39001-02-0 | OCDF | 0.80 | J B | B | B | PG/G | 1 |
| 55722-27-5 | Total TCDF | 0.25 | | B | B | PG/G | 1 |
| 30402-15-4 | Total PeCDF | 0.25 | | B | B | PG/G | 1 |
| 55684-94-1 | Total HxCDF | 0.13 | | | | PG/G | 1 |
| 38998-75-3 | Total HpCDF | 0.84 | | B | B | PG/G | 1 |
| 41903-57-5 | Total TCDD | 0.18 | | B | B | PG/G | 1 |
| 1746-01-6 | 2,3,7,8-TCDD | 1.3 | U | | U | PG/G | 1 |
| 36088-22-9 | Total PeCDD | 0.060 | | | | PG/G | 1 |
| 40321-76-4 | 1,2,3,7,8-PeCDD | 6.3 | U | | U | PG/G | 1 |
| 34465-46-8 | Total HxCDD | 4.1 | | | | PG/G | 1 |
| 19408-74-3 | 1,2,3,7,8,9-HxCDD | 6.3 | U | | U | PG/G | 1 |
| 37871-00-4 | Total HpCDD | 130 | | | | PG/G | 1 |
| 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 65 | B | | | PG/G | 1 |
| 57117-44-9 | 1,2,3,6,7,8-HxCDF | 6.3 | U | | U | PG/G | 1 |
| 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.15 | J B | B | B | PG/G | 1 |
| 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.46 | J | J | J | PG/G | 1 |
| 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.42 | J B | B | B | PG/G | 1 |
| 3268-87-9 | OCDD | 6700 | B | | | PG/G | 10 |

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|---|---|---|---|---|---|---|---|---|
| Q1028 | Percent Moisture | 20.3 | | | | | % | 1 |
| 7439-92-1 | Lead | 15.1 | | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 35000 | | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 4.0 | | | | | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 1.5 | | | | | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 3.0 | | | | | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.082 | J | J | | J | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.12 | J | J | | J | MG/KG | 0.99 |

| MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|
| 0.16 | 1.2 | PP01 | N | T | D | 20 |
| 0.25 | 6.1 | PP01 | N | T | D | 20 |
| 0.27 | 6.1 | PP01 | N | T | D | 20 |
| 0.21 | 6.1 | PP01 | N | T | D | 20 |
| 0.20 | 6.1 | PP01 | N | T | D | 20 |
| 0.22 | 6.1 | PP01 | N | T | D | 20 |
| 0.17 | 6.1 | PP01 | N | T | D | 20 |
| 0.22 | 12 | PP01 | N | T | D | 20 |
| 0.16 | 1.2 | PP01 | N | T | D | 20 |
| 0.26 | 6.1 | PP01 | N | T | D | 20 |
| 0.20 | 6.1 | PP01 | N | T | D | 20 |
| 0.19 | 6.1 | PP01 | N | T | D | 20 |
| 0.20 | 1.2 | PP01 | N | T | D | 20 |
| 0.20 | 1.2 | PP01 | N | T | D | 20 |
| 0.42 | 6.1 | PP01 | N | T | D | 20 |
| 0.42 | 6.1 | PP01 | N | T | D | 20 |
| 0.27 | 6.1 | PP01 | N | T | D | 20 |
| 0.25 | 6.1 | PP01 | N | T | D | 20 |
| 0.68 | 6.1 | PP01 | N | T | D | 20 |
| 0.68 | 6.1 | PP01 | N | T | D | 20 |
| 0.17 | 6.1 | PP01 | N | T | D | 20 |
| 0.21 | 6.1 | PP01 | N | T | D | 20 |
| 0.32 | 6.1 | PP01 | N | T | D | 20 |
| 0.24 | 6.1 | PP01 | N | T | D | 20 |
| 2.9 | 120 | PP02 | N | T | D | 20 |
| 0.1 | 0.1 | PP01 | N | T | W | 20 |
| 0.75 | 2.5 | PP01 | N | T | D | 20 |
| 8.7 | 26.1 | PP01 | N | T | D | 20 |
| 0.004 | 0.25 | PP01 | N | T | W | 20 |
| 0.005 | 0.25 | PP01 | N | T | W | 20 |
| 0.007 | 1.2 | PP01 | N | T | W | 20 |
| 0.015 | 0.50 | PP01 | N | T | W | 20 |
| 0.013 | 0.25 | PP01 | N | T | W | 20 |
| 0.018 | 0.50 | PP01 | N | T | W | 20 |
| 0.039 | 0.50 | PP02 | N | T | W | 20 |
| 0.1 | 0.1 | PP01 | N | T | W | 9.2 |
| 0.66 | 2.2 | PP01 | N | T | D | 9.2 |
| 7.7 | 23.1 | PP01 | N | T | D | 9.2 |
| 0.004 | 0.25 | PP01 | N | T | W | 9.2 |
| 0.015 | 0.50 | PP01 | N | T | W | 9.2 |
| 0.013 | 0.25 | PP01 | N | T | W | 9.2 |
| 0.018 | 0.50 | PP01 | N | T | W | 9.2 |
| 0.11 | 5.0 | PP02 | N | T | W | 9.2 |
| 0.15 | 25 | PP02 | N | T | W | 9.2 |
| 0.39 | 5.0 | PP02 | N | T | W | 9.2 |
| 0.1 | 0.1 | PP01 | N | T | W | 18 |
| 0.73 | 2.4 | PP01 | N | T | D | 18 |
| 8.5 | 25.6 | PP01 | N | T | D | 18 |
| 0.004 | 0.25 | PP01 | N | T | W | 18 |
| 0.015 | 0.50 | PP01 | N | T | W | 18 |

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|---|---|---|---|---|---|---|
| 0.013 | 0.25 | PP01 | N | T | W | 18 |
| 0.018 | 0.50 | PP01 | N | T | W | 18 |
| 0.26 | 12 | PP02 | N | T | W | 18 |
| 0.36 | 62 | PP02 | N | T | W | 18 |
| 0.97 | 12 | PP02 | N | T | W | 18 |
| 0.1 | 0.1 | PP01 | N | T | W | 20 |
| 0.75 | 2.5 | PP01 | N | T | D | 20 |
| 8.7 | 26.1 | PP01 | N | T | D | 20 |
| 0.004 | 0.25 | PP01 | N | T | W | 20 |
| 0.015 | 0.50 | PP01 | N | T | W | 20 |
| 0.53 | 25 | PP02 | N | T | W | 20 |
| 0.73 | 120 | PP02 | N | T | W | 20 |
| 1.9 | 25 | PP02 | N | T | W | 20 |
| 1.3 | 25 | PP02 | N | T | W | 20 |
| 1.8 | 50 | PP02 | N | T | W | 20 |
| 0.1 | 0.1 | PP01 | N | T | W | 17 |
| 0.72 | 2.4 | PP01 | N | T | D | 17 |
| 8.4 | 25.2 | PP01 | N | T | D | 17 |
| 0.004 | 0.25 | PP01 | N | T | W | 17 |
| 0.015 | 0.50 | PP01 | N | T | W | 17 |
| 5.3 | 250 | PP02 | N | T | W | 17 |
| 7.3 | 250 | PP02 | N | T | W | 17 |
| 19 | 250 | PP02 | N | T | W | 17 |
| 13 | 250 | PP02 | N | T | W | 17 |
| 18 | 500 | PP02 | N | T | W | 17 |
| 0.1 | 0.1 | PP01 | N | T | W | 19 |
| 0.74 | 2.5 | PP01 | N | T | D | 19 |
| 8.6 | 25.9 | PP01 | N | T | D | 19 |
| 0.004 | 0.25 | PP01 | N | T | W | 19 |
| 0.015 | 0.50 | PP01 | N | T | W | 19 |
| 2.6 | 120 | PP02 | N | T | W | 19 |
| 3.6 | 120 | PP02 | N | T | W | 19 |
| 9.7 | 120 | PP02 | N | T | W | 19 |
| 6.5 | 120 | PP02 | N | T | W | 19 |
| 9.1 | 250 | PP02 | N | T | W | 19 |
| 0.1 | 0.1 | PP01 | N | T | W | 23 |
| 0.78 | 2.6 | PP01 | N | T | D | 23 |
| 9.1 | 27.2 | PP01 | N | T | D | 23 |
| 0.004 | 0.25 | PP01 | N | T | W | 23 |
| 0.015 | 0.50 | PP01 | N | T | W | 23 |
| 2.6 | 120 | PP02 | N | T | W | 23 |
| 3.6 | 120 | PP02 | N | T | W | 23 |
| 9.7 | 120 | PP02 | N | T | W | 23 |
| 6.5 | 120 | PP02 | N | T | W | 23 |
| 9.1 | 250 | PP02 | N | T | W | 23 |
| 0.1 | 0.1 | PP01 | N | T | W | 16 |
| 0.72 | 2.4 | PP01 | N | T | D | 16 |
| 8.4 | 25.1 | PP01 | N | T | D | 16 |
| 0.004 | 0.25 | PP01 | N | T | W | 16 |
| 0.015 | 0.50 | PP01 | N | T | W | 16 |
| 2.6 | 120 | PP03 | N | T | W | 16 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3.6 | 120 | PP03 | N | T | W | 16 |
| 9.7 | 120 | PP03 | N | T | W | 16 |
| 6.5 | 120 | PP03 | N | T | W | 16 |
| 9.1 | 250 | PP03 | N | T | W | 16 |
| 0.1 | 0.1 | PP01 | N | T | W | 16 |
| 0.72 | 2.4 | PP01 | N | T | D | 16 |
| 8.4 | 25.1 | PP01 | N | T | D | 16 |
| 0.004 | 0.25 | PP02 | N | T | W | 16 |
| 0.015 | 0.50 | PP02 | N | T | W | 16 |
| 2.6 | 120 | PP01 | N | T | W | 16 |
| 3.6 | 120 | PP01 | N | T | W | 16 |
| 9.7 | 120 | PP01 | N | T | W | 16 |
| 6.5 | 120 | PP01 | N | T | W | 16 |
| 9.1 | 250 | PP01 | N | T | W | 16 |
| 0.1 | 0.1 | PP01 | N | T | W | 19 |
| 0.74 | 2.5 | PP01 | N | T | D | 19 |
| 8.6 | 25.9 | PP01 | N | T | D | 19 |
| 0.004 | 0.25 | PP01 | N | T | W | 19 |
| 0.005 | 0.25 | PP01 | N | T | W | 19 |
| 0.007 | 0.25 | PP01 | N | T | W | 19 |
| 0.015 | 0.50 | PP01 | N | T | W | 19 |
| 0.013 | 0.25 | PP01 | N | T | W | 19 |
| 0.018 | 0.50 | PP01 | N | T | W | 19 |
| 0.097 | 1.2 | PP02 | N | T | W | 19 |
| 0.1 | 0.1 | PP01 | N | T | W | 19 |
| 0.74 | 2.5 | PP01 | N | T | D | 19 |
| 8.7 | 26.1 | PP01 | N | T | D | 19 |
| 0.004 | 0.25 | PP01 | N | T | W | 19 |
| 0.005 | 0.25 | PP01 | N | T | W | 19 |
| 0.007 | 0.25 | PP01 | N | T | W | 19 |
| 0.015 | 0.50 | PP01 | N | T | W | 19 |
| 0.013 | 0.25 | PP01 | N | T | W | 19 |
| 0.018 | 0.50 | PP01 | N | T | W | 19 |
| 0.097 | 1.2 | PP02 | N | T | W | 19 |
| 0.1 | 0.1 | PP01 | N | T | W | 20 |
| 0.75 | 2.5 | PP01 | N | T | D | 20 |
| 8.7 | 26.1 | PP01 | N | T | D | 20 |
| 0.004 | 0.25 | PP01 | N | T | W | 20 |
| 0.005 | 0.25 | PP01 | N | T | W | 20 |
| 0.007 | 0.25 | PP01 | N | T | W | 20 |
| 0.015 | 0.50 | PP01 | N | T | W | 20 |
| 0.013 | 0.25 | PP01 | N | T | W | 20 |
| 0.018 | 0.50 | PP01 | N | T | W | 20 |
| 0.097 | 1.2 | PP02 | N | T | W | 20 |
| 0.1 | 0.1 | PP01 | N | T | W | 19 |
| 0.74 | 2.5 | PP01 | N | T | D | 19 |
| 8.7 | 26 | PP01 | N | T | D | 19 |
| 0.004 | 0.25 | PP01 | N | T | W | 19 |
| 0.005 | 0.25 | PP01 | N | T | W | 19 |
| 0.007 | 0.25 | PP01 | N | T | W | 19 |
| 0.015 | 0.50 | PP01 | N | T | W | 19 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.013 | 0.25 | PP01 | N | T | W | 19 |
| 0.018 | 0.50 | PP01 | N | T | W | 19 |
| 0.097 | 1.2 | PP02 | N | T | W | 19 |
| 0.20 | 1.2 | PP01 | N | T | D | 18 |
| 0.034 | 6.1 | PP01 | N | T | D | 18 |
| 0.036 | 6.1 | PP01 | N | T | D | 18 |
| 0.042 | 6.1 | PP01 | N | T | D | 18 |
| 0.038 | 6.1 | PP01 | N | T | D | 18 |
| 0.043 | 6.1 | PP01 | N | T | D | 18 |
| 0.063 | 6.1 | PP01 | N | T | D | 18 |
| 0.081 | 12 | PP01 | N | T | D | 18 |
| 0.060 | 1.2 | PP01 | N | T | D | 18 |
| 0.034 | 6.1 | PP01 | N | T | D | 18 |
| 0.039 | 6.1 | PP01 | N | T | D | 18 |
| 0.069 | 6.1 | PP01 | N | T | D | 18 |
| 0.029 | 1.2 | PP01 | N | T | D | 18 |
| 0.074 | 1.2 | PP01 | N | T | D | 18 |
| 0.082 | 6.1 | PP01 | N | T | D | 18 |
| 0.082 | 6.1 | PP01 | N | T | D | 18 |
| 0.042 | 6.1 | PP01 | N | T | D | 18 |
| 0.039 | 6.1 | PP01 | N | T | D | 18 |
| 0.48 | 6.1 | PP01 | N | T | D | 18 |
| 0.48 | 6.1 | PP01 | N | T | D | 18 |
| 0.034 | 6.1 | PP01 | N | T | D | 18 |
| 0.077 | 6.1 | PP01 | N | T | D | 18 |
| 0.049 | 6.1 | PP01 | N | T | D | 18 |
| 0.039 | 6.1 | PP01 | N | T | D | 18 |
| 0.56 | 120 | PP02 | N | T | D | 18 |
| 0.1 | 0.1 | PP01 | N | T | W | 18 |
| 0.74 | 2.5 | PP01 | N | T | D | 18 |
| 8.6 | 25.8 | PP01 | N | T | D | 18 |
| 0.004 | 0.25 | PP01 | N | T | W | 18 |
| 0.005 | 0.25 | PP01 | N | T | W | 18 |
| 0.007 | 0.25 | PP01 | N | T | W | 18 |
| 0.015 | 0.50 | PP01 | N | T | W | 18 |
| 0.019 | 0.25 | PP01 | N | T | W | 18 |
| 0.013 | 0.25 | PP01 | N | T | W | 18 |
| 0.018 | 0.50 | PP01 | N | T | W | 18 |
| 0.1 | 0.1 | PP01 | N | T | W | 18 |
| 0.73 | 2.4 | PP01 | N | T | D | 18 |
| 8.6 | 25.7 | PP01 | N | T | D | 18 |
| 0.004 | 0.25 | PP01 | N | T | W | 18 |
| 0.005 | 0.25 | PP01 | N | T | W | 18 |
| 0.007 | 0.25 | PP01 | N | T | W | 18 |
| 0.015 | 0.50 | PP01 | N | T | W | 18 |
| 0.013 | 0.25 | PP01 | N | T | W | 18 |
| 0.018 | 0.50 | PP01 | N | T | W | 18 |
| 0.097 | 1.2 | PP02 | N | T | W | 18 |
| 0.1 | 0.1 | PP01 | N | T | W | 17 |
| 0.73 | 2.4 | PP01 | N | T | D | 17 |
| 8.5 | 25.4 | PP01 | N | T | D | 17 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.004 | 0.25 | PP01 | N | T | W | 17 |
| 0.005 | 0.25 | PP01 | N | T | W | 17 |
| 0.007 | 0.25 | PP01 | N | T | W | 17 |
| 0.015 | 0.50 | PP01 | N | T | W | 17 |
| 0.013 | 0.25 | PP01 | N | T | W | 17 |
| 0.018 | 0.50 | PP01 | N | T | W | 17 |
| 0.097 | 1.2 | PP02 | N | T | W | 17 |
| 0.1 | 0.1 | PP01 | N | T | W | 18 |
| 0.74 | 2.5 | PP01 | N | T | D | 18 |
| 8.6 | 25.7 | PP01 | N | T | D | 18 |
| 0.004 | 0.25 | PP01 | N | T | W | 18 |
| 0.005 | 0.25 | PP01 | N | T | W | 18 |
| 0.007 | 0.25 | PP01 | N | T | W | 18 |
| 0.015 | 0.50 | PP01 | N | T | W | 18 |
| 0.013 | 0.25 | PP01 | N | T | W | 18 |
| 0.018 | 0.50 | PP01 | N | T | W | 18 |
| 0.097 | 1.2 | PP02 | N | T | W | 18 |
| 0.1 | 0.1 | PP01 | N | T | W | 12 |
| 0.69 | 2.3 | PP01 | N | T | D | 12 |
| 8.0 | 24 | PP01 | N | T | D | 12 |
| 0.004 | 0.25 | PP01 | N | T | W | 12 |
| 0.005 | 0.25 | PP01 | N | T | W | 12 |
| 0.007 | 0.25 | PP01 | N | T | W | 12 |
| 0.015 | 0.50 | PP01 | N | T | W | 12 |
| 0.013 | 0.25 | PP01 | N | T | W | 12 |
| 0.018 | 0.50 | PP01 | N | T | W | 12 |
| 0.097 | 1.2 | PP02 | N | T | W | 12 |
| 0.1 | 0.1 | PP01 | N | T | W | 14 |
| 0.70 | 2.3 | PP01 | N | T | D | 14 |
| 8.2 | 24.5 | PP01 | N | T | D | 14 |
| 0.004 | 0.25 | PP01 | N | T | W | 14 |
| 0.007 | 0.25 | PP01 | N | T | W | 14 |
| 0.015 | 0.50 | PP01 | N | T | W | 14 |
| 0.013 | 0.25 | PP01 | N | T | W | 14 |
| 0.018 | 0.50 | PP01 | N | T | W | 14 |
| 0.026 | 1.2 | PP02 | N | T | W | 14 |
| 0.097 | 1.2 | PP02 | N | T | W | 14 |
| 0.1 | 0.1 | PP01 | N | T | W | 12 |
| 0.68 | 2.3 | PP01 | N | T | D | 12 |
| 7.9 | 23.8 | PP01 | N | T | D | 12 |
| 0.004 | 0.25 | PP01 | N | T | W | 12 |
| 0.005 | 0.25 | PP01 | N | T | W | 12 |
| 0.007 | 0.25 | PP01 | N | T | W | 12 |
| 0.015 | 0.50 | PP01 | N | T | W | 12 |
| 0.019 | 0.25 | PP01 | N | T | W | 12 |
| 0.013 | 0.25 | PP01 | N | T | W | 12 |
| 0.018 | 0.50 | PP01 | N | T | W | 12 |
| 0.1 | 0.1 | PP01 | N | T | W | 13 |
| 0.69 | 2.3 | PP01 | N | T | D | 13 |
| 8.1 | 24.3 | PP01 | N | T | D | 13 |
| 0.004 | 0.25 | PP01 | N | T | W | 13 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.005 | 0.25 | PP01 | N | T | W | 13 |
| 0.007 | 0.25 | PP01 | N | T | W | 13 |
| 0.015 | 0.50 | PP01 | N | T | W | 13 |
| 0.013 | 0.25 | PP01 | N | T | W | 13 |
| 0.018 | 0.50 | PP01 | N | T | W | 13 |
| 0.097 | 1.2 | PP02 | N | T | W | 13 |
| 0.1 | 0.1 | PP01 | N | T | W | 20 |
| 0.75 | 2.5 | PP01 | N | T | D | 20 |
| 8.8 | 26.4 | PP01 | N | T | D | 20 |
| 0.004 | 0.25 | PP02 | N | T | W | 20 |
| 0.005 | 0.25 | PP02 | N | T | W | 20 |
| 0.007 | 0.25 | PP02 | N | T | W | 20 |
| 0.015 | 0.50 | PP02 | N | T | W | 20 |
| 0.019 | 0.25 | PP02 | N | T | W | 20 |
| 0.013 | 0.25 | PP02 | N | T | W | 20 |
| 0.018 | 0.50 | PP02 | N | T | W | 20 |
| 0.1 | 0.1 | PP01 | N | T | W | 21 |
| 0.76 | 2.5 | PP01 | N | T | D | 21 |
| 8.8 | 26.4 | PP01 | N | T | D | 21 |
| 0.004 | 0.25 | PP01 | N | T | W | 21 |
| 0.005 | 0.25 | PP01 | N | T | W | 21 |
| 0.007 | 0.25 | PP01 | N | T | W | 21 |
| 0.015 | 0.50 | PP01 | N | T | W | 21 |
| 0.019 | 0.25 | PP01 | N | T | W | 21 |
| 0.013 | 0.25 | PP01 | N | T | W | 21 |
| 0.018 | 0.50 | PP01 | N | T | W | 21 |
| 0.040 | 1.3 | PP01 | N | T | D | 20 |
| 0.097 | 6.3 | PP01 | N | T | D | 20 |
| 0.031 | 6.3 | PP01 | N | T | D | 20 |
| 0.12 | 6.3 | PP01 | N | T | D | 20 |
| 0.016 | 6.3 | PP01 | N | T | D | 20 |
| 0.20 | 6.3 | PP01 | N | T | D | 20 |
| 0.040 | 6.3 | PP01 | N | T | D | 20 |
| 0.075 | 13 | PP01 | N | T | D | 20 |
| 0.040 | 1.3 | PP01 | N | T | D | 20 |
| 0.030 | 6.3 | PP01 | N | T | D | 20 |
| 0.018 | 6.3 | PP01 | N | T | D | 20 |
| 0.044 | 6.3 | PP01 | N | T | D | 20 |
| 0.031 | 1.3 | PP01 | N | T | D | 20 |
| 0.12 | 1.3 | PP01 | N | T | D | 20 |
| 0.056 | 6.3 | PP01 | N | T | D | 20 |
| 0.16 | 6.3 | PP01 | N | T | D | 20 |
| 0.040 | 6.3 | PP01 | N | T | D | 20 |
| 0.75 | 6.3 | PP01 | N | T | D | 20 |
| 0.66 | NA | PP01 | N | T | D | 20 |
| 0.66 | NA | PP01 | N | T | D | 20 |
| 0.084 | 6.3 | PP01 | N | T | D | 20 |
| 0.049 | 6.3 | PP01 | N | T | D | 20 |
| 0.048 | 6.3 | PP01 | N | T | D | 20 |
| 0.038 | 6.3 | PP01 | N | T | D | 20 |
| 0.61 | 130 | PP02 | N | T | D | 20 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.1 | 0.1 | PP01 | N | T | W | 20 |
| 0.75 | 2.5 | PP01 | N | T | D | 20 |
| 8.8 | 26.3 | PP01 | N | T | D | 20 |
| 0.004 | 0.25 | PP01 | N | T | W | 20 |
| 0.005 | 0.25 | PP01 | N | T | W | 20 |
| 0.007 | 0.25 | PP01 | N | T | W | 20 |
| 0.015 | 0.50 | PP01 | N | T | W | 20 |
| 0.019 | 0.25 | PP01 | N | T | W | 20 |
| 0.013 | 0.25 | PP01 | N | T | W | 20 |
| 0.018 | 0.50 | PP01 | N | T | W | 20 |

# SOLID, 8330B, Explosives

Shaw E & I Inc

Client Sample ID: 51DW01

HPLC

**Lot-Sample #...:** G8K210315-001 **Work Order #...:** K3GDR2AQ **Matrix.....:** SOLID
**Date Sampled...:** 11/20/08 **Date Received..:** 11/21/08
**Prep Date.....:** 11/24/08 **Analysis Date..:** 11/27/08
**Prep Batch #...:** 8329477
**Dilution Factor:** 498.5
**% Moisture.....:** 29 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 120 | mg/kg | 6.2 |
| 1,3-Dinitrobenzene | ND | 120 | mg/kg | 2.1 |
| **2,4-Dinitrotoluene** | **2500** | **120** | **mg/kg** | **2.6** |
| **2,6-Dinitrotoluene** | **610 J** | **620** | **mg/kg** | **3.6** |
| Nitroglycerin | ND | 250 | mg/kg | 7.5 |
| **2-Nitrotoluene** | **1300** | **120** | **mg/kg** | **6.5** |
| **4-Nitrotoluene** | **1000** | **250** | **mg/kg** | **9.1** |
| Nitrobenzene | ND | 120 | mg/kg | 8.8 |
| **1,3,5-Trinitrobenzene** | **37 J** | **120** | **mg/kg** | **5.0** |
| **2,4,6-Trinitrotoluene** | **2700** | **120** | **mg/kg** | **9.7** |
| HMX | ND | 120 | mg/kg | 6.0 |
| RDX | ND | 120 | mg/kg | 6.0 |
| Tetryl | ND | 120 | mg/kg | 5.0 |
| **3-Nitrotoluene** | **120 PG** | **120** | **mg/kg** | **7.7** |
| 4-Amino-2,6-dinitrotoluene | ND | 120 | mg/kg | 5.0 |
| PETN | ND | 250 | mg/kg | 12 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery

* Surrogate recovery is outside stated control limits

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

# SOLID, 8290, Dioxins/Furans with Totals

Shaw E & I Inc

Sample ID: 51DW01

Trace Level Organic Compounds

SW846 8290

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G8K210315 - 001 | **Work Order #....:** | K3GDR2AR | **Matrix....:** | SO |
| **Date Sampled....:** | 11/20/08 | **Date Received....:** | 11/21/08 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 12/01/08 | **Analysis Date....:** | 12/05/08 | **Percent Moisture:** | 29 |
| **Prep Batch # ....:** | 8336625 | **Instrument ID....:** | 8D5 | | |
| **Initial Wgt/Vol :** | 10.44 g | **Analyst ID....:** | Wayne Halozan | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.4 | 0 51 | pg/g |
| Total TCDD | ND | | 1.4 | 0.51 | pg/g |
| **1,2,3,7,8-PeCDD** | **0.96** | **J** | **7.1** | **0.96** | **pg/g** |
| **Total PeCDD** | **0.96** | | **7.1** | **0.96** | **pg/g** |
| **1,2,3,4,7,8-HxCDD** | **2.7** | **J** | **7.1** | **0.48** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **10** | | **7.1** | **0.40** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **5.0** | **J** | **7.1** | **0.40** | **pg/g** |
| **Total HxCDD** | **45** | | **7.1** | **0.41** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **290** | | **7.1** | **0.81** | **pg/g** |
| **Total HpCDD** | **480** | | **7.1** | **0.81** | **pg/g** |
| **OCDD** | **4700** | **B** | **14** | **1.1** | **pg/g** |
| **2,3,7,8-TCDF** | **24** | **CON** | **1.4** | **0.52** | **pg/g** |
| **Total TCDF** | **100** | | **1.4** | **0.52** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **5.4** | **J** | **7.1** | **0.47** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **13** | | **7.1** | **0.47** | **pg/g** |
| **Total PeCDF** | **58** | | **7.1** | **0.47** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **9.3** | | **7.1** | **0.34** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **4.0** | **J** | **7.1** | **0.28** | **pg/g** |
| 2,3,4,6,7,8-HxCDF | ND | | 7.1 | 2.1 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 7.1 | 0 37 | pg/g |
| **Total HxCDF** | **84** | | **7.1** | **0.33** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **52** | | **7.1** | **0.43** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **5.6** | **J** | **7.1** | **0.51** | **pg/g** |
| **Total HpCDF** | **170** | | **7.1** | **0.45** | **pg/g** |
| **OCDF** | **170** | | **14** | **0.67** | **pg/g** |

# SOLID, 1311/6010/7470, TCLP RCRA Metals

Shaw E & I Inc

Client Sample ID: 51DW01

TCLP Metals

Lot-Sample #...: G8K210315-001 Matrix.....: SOLID
Date Sampled...: 11/20/08 Date Received..: 11/21/08
Leach Date.....: 11/24/08 Leach Batch #..: P832912

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...: 8330066** | | | | | | |
| Silver | ND | 0.025 | mg/L | SW846 6010B | 11/25/08 | K3GDR1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.0050 | | |
| Arsenic | ND | 0.10 | mg/L | SW846 6010B | 11/25/08 | K3GDR1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.035 | | |
| **Barium** | **1.2 J** | **0.50** | **mg/L** | **SW846 6010B** | **11/25/08** | **K3GDR1AE** |
| | | Dilution Factor: 1 | | MDL.....: 0.020 | | |
| Cadmium | ND | 0.010 | mg/L | SW846 6010B | 11/25/08 | K3GDR1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.0050 | | |
| Chromium | ND | 0.025 | mg/L | SW846 6010B | 11/25/08 | K3GDR1AG |
| | | Dilution Factor: 1 | | MDL.....: 0.020 | | |
| **Lead** | **0.29** | **0.050** | **mg/L** | **SW846 6010B** | **11/25/08** | **K3GDR1AH** |
| | | Dilution Factor: 1 | | MDL.....: 0.015 | | |
| **Selenium** | **0.057 B** | **0.075** | **mg/L** | **SW846 6010B** | **11/25/08** | **K3GDR1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.035 | | |
| **Prep Batch #...: 8330109** | | | | | | |
| Mercury | ND | 0.0030 | mg/L | SW846 7470A | 11/25-11/26/08 | K3GDR1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.0010 | | |

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

# General Chemistry - Various Methods

Shaw E & I Inc

Client Sample ID: 51DW01

General Chemistry

Lot-Sample #...: G8K210315-001 Work Order #...: K3GDR Matrix.....: SO
Date Sampled...: 11/20/08 Date Received..: 11/21/08
% Moisture.....: 29

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| pH | 7.6 | 0.10 | -- | SW846 9045C | 11/24/08 | 8329629 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |
| Cyanide, Total | 4.0 | 0.71 | mg/kg | SW846 9012A | 11/24/08 | 8330316 |
| | | Dilution Factor: 1 | | MDL.....: 0.54 | | |
| Ignitability | ND | -- | -- | SW846 SECTION 7.1 | 11/26/08 | 8331440 |
| | | Dilution Factor: 1 | | MDL.....: | | |
| Percent Moisture | 29.5 | 0.10 | % | ASTM D 2216-90 | 11/24-11/25/08 | 8329325 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |
| Total Sulfide | ND | 7.1 | mg/kg | SW846 9030B/9034 | 11/26/08 | 8331523 |
| | | Dilution Factor: 1 | | MDL.....: 3.4 | | |

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight

The analyte was not detected at the limit of detection

# SOLID, 1311/8270C, TCLP 2,4-DNT

**Shaw E & I Inc**

**Client Sample ID: 5IDW02**

**TCLP GC/MS Semivolatiles**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9A020131-001 | **Work Order #...:** | K5E0H1AC | **Matrix.....:** | SO |
| **Date Sampled...:** | 12/30/08 | **Date Received..:** | 01/02/09 | | |
| **Leach Date.....:** | 01/05/09 | **Prep Date.....:** | 01/06/09 | **Analysis Date..:** | 01/09/09 |
| **Leach Batch #..:** | P900606 | **Prep Batch #...:** | 9006118 | | |
| **Dilution Factor:** | 500 | | | | |
| **% Moisture.....:** | | **Method.....:** | SW846 8270C | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **170000 Q** | **25000** | **ug/L** | **12000** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Fluorobiphenyl | 0.0 SRD | (37 - 107) |
| 2-Fluorophenol | 0.0 SRD | (12 - 91 ) |
| Nitrobenzene-d5 | 0.0 SRD | (46 - 103) |
| Phenol-d5 | 0.0 SRD | (10 - 71 ) |
| Terphenyl-d14 | 0.0 SRD | (66 - 124) |
| 2,4,6-Tribromophenol | 0.0 SRD | (28 - 128) |

**NOTE(S):**

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC01 | 9.0 | 9.5 | TAWS | G9C050192 | 51SC01 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC02 | 11.0 | 11.5 | TAWS | G9C050192 | 51SC02 | SS |
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |

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|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |
| RFAAP | SWMU 51 | 51SC03 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC03 | SS |
| RFAAP | SWMU 51 | 51SC04 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC04 | SS |
| RFAAP | SWMU 51 | 51SC04 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC04 | SS |
| RFAAP | SWMU 51 | 51SC04 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC04 | SS |
| RFAAP | SWMU 51 | 51SC04 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC04 | SS |
| RFAAP | SWMU 51 | 51SC04 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC04 | SS |
| RFAAP | SWMU 51 | 51SC04 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC04 | SS |
| RFAAP | SWMU 51 | 51SC04 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC04 | SS |
| RFAAP | SWMU 51 | 51SC04 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC04 | SS |
| RFAAP | SWMU 51 | 51SC04 | 6.0 | 6.5 | TAWS | G9C050192 | 51SC04 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC05 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC05 | SS |
| RFAAP | SWMU 51 | 51SC06 | 12.0 | 12.5 | TAWS | G9C050192 | 51SC06 | SS |
| RFAAP | SWMU 51 | 51SC06 | 12.0 | 12.5 | TAWS | G9C050192 | 51SC06 | SS |
| RFAAP | SWMU 51 | 51SC06 | 12.0 | 12.5 | TAWS | G9C050192 | 51SC06 | SS |
| RFAAP | SWMU 51 | 51SC06 | 12.0 | 12.5 | TAWS | G9C050192 | 51SC06 | SS |
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| RFAAP | SWMU 51 | 51SC06 | 12.0 | 12.5 | TAWS | G9C050192 | 51SC06 | SS |
| RFAAP | SWMU 51 | 51SC06 | 12.0 | 12.5 | TAWS | G9C050192 | 51SC06 | SS |
| RFAAP | SWMU 51 | 51SC06 | 12.0 | 12.5 | TAWS | G9C050192 | 51SC06 | SS |
| RFAAP | SWMU 51 | 51SC06 | 12.0 | 12.5 | TAWS | G9C050192 | 51SC06 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC07 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC07 | SS |
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |

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|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |
| RFAAP | SWMU 51 | 51SC08 | 4.0 | 4.5 | TAWS | G9C050192 | 51SC08 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC09 | 8.0 | 8.5 | TAWS | G9C050192 | 51SC09 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU 51 | 51SC10 | 10.0 | 10.5 | TAWS | G9C050192 | 51SC10 | SS |
| RFAAP | SWMU51 | 51SC15 | 13.0 | 13.5 | TAWS | G9C110192 | 51SC15 | SS |
| RFAAP | SWMU51 | 51SC15 | 13.0 | 13.5 | TAWS | G9C110192 | 51SC15 | SS |
| RFAAP | SWMU51 | 51SC15 | 13.0 | 13.5 | TAWS | G9C110192 | 51SC15 | SS |
| RFAAP | SWMU51 | 51SC15 | 13.0 | 13.5 | TAWS | G9C110192 | 51SC15 | SS |
| RFAAP | SWMU51 | 51SC15 | 13.0 | 13.5 | TAWS | G9C110192 | 51SC15 | SS |
| RFAAP | SWMU51 | 51SC15 | 13.0 | 13.5 | TAWS | G9C110192 | 51SC15 | SS |
| RFAAP | SWMU51 | 51SC15 | 13.0 | 13.5 | TAWS | G9C110192 | 51SC15 | SS |
| RFAAP | SWMU51 | 51SC15 | 13.0 | 13.5 | TAWS | G9C110192 | 51SC15 | SS |
| RFAAP | SWMU51 | 51SC15 | 13.0 | 13.5 | TAWS | G9C110192 | 51SC15 | SS |
| RFAAP | SWMU51 | 51SC17 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC17 | SS |
| RFAAP | SWMU51 | 51SC17 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC17 | SS |
| RFAAP | SWMU51 | 51SC17 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC17 | SS |
| RFAAP | SWMU51 | 51SC17 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC17 | SS |
| RFAAP | SWMU51 | 51SC17 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC17 | SS |
| RFAAP | SWMU51 | 51SC17 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC17 | SS |
| RFAAP | SWMU51 | 51SC17 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC17 | SS |
| RFAAP | SWMU51 | 51SC17 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC17 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |
| RFAAP | SWMU51 | 51SC19 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC19 | SS |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
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| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
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| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
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| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC21 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC21 | SS |
| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
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| RFAAP | SWMU51 | 51SC23 | 12.0 | 12.5 | TAWS | G9C110192 | 51SC23 | SS |
| RFAAP | SWMU51 | 51SC24 | 10.0 | 10.5 | TAWS | G9C110192 | 51SC24 | SS |
| RFAAP | SWMU51 | 51SC24 | 10.0 | 10.5 | TAWS | G9C110192 | 51SC24 | SS |
| RFAAP | SWMU51 | 51SC24 | 10.0 | 10.5 | TAWS | G9C110192 | 51SC24 | SS |
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| RFAAP | SWMU51 | 51SC24 | 10.0 | 10.5 | TAWS | G9C110192 | 51SC24 | SS |
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| RFAAP | SWMU51 | 51SC24 | 10.0 | 10.5 | TAWS | G9C110192 | 51SC24 | SS |
| RFAAP | SWMU51 | 51SC25 | 6.0 | 6.5 | TAWS | G9C110192 | 51SC25 | SS |
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| RFAAP | SWMU51 | 51SC26 | 8.0 | 8.5 | TAWS | G9C110192 | 51SC26 | SS |
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| RFAAP | SWMU51 | 51SC01D | 9.0 | 9.5 | TAWS | G9C110192 | 51SC01D | SS |
| RFAAP | SWMU51 | 51SC01D | 9.0 | 9.5 | TAWS | G9C110192 | 51SC01D | SS |
| RFAAP | SWMU51 | 51SC01D | 9.0 | 9.5 | TAWS | G9C110192 | 51SC01D | SS |
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| RFAAP | SWMU51 | 51SC01D | 9.0 | 9.5 | TAWS | G9C110192 | 51SC01D | SS |
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| RFAAP | SWMU51 | 51SC07D | 10.0 | 10.5 | TAWS | G9C110192 | 51SC07D | SS |
| RFAAP | SWMU51 | 51SC07D | 10.0 | 10.5 | TAWS | G9C110192 | 51SC07D | SS |
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| RFAAP | SWMU51 | 51SC07D | 10.0 | 10.5 | TAWS | G9C110192 | 51SC07D | SS |
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| RFAAP | SWMU51 | 51SC07D | 10.0 | 10.5 | TAWS | G9C110192 | 51SC07D | SS |
| RFAAP | SWMU51 | 51SC07D | 10.0 | 10.5 | TAWS | G9C110192 | 51SC07D | SS |
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| RFAAP | SWMU51 | 51SC07D | 10.0 | 10.5 | TAWS | G9C110192 | 51SC07D | SS |
| RFAAP | SWMU 51 | 51SC42 | 2.0 | 2.5 | TAWS | G9D080171 | 51SC42 | SS |
| RFAAP | SWMU 51 | 51SC42 | 2.0 | 2.5 | TAWS | G9D080171 | 51SC42 | SS |
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| RFAAP | SWMU 51 | 51SC43 | 4.0 | 4.5 | TAWS | G9D080171 | 51SC43 | SS |
| RFAAP | SWMU 51 | 51SC43 | 4.0 | 4.5 | TAWS | G9D080171 | 51SC43 | SS |

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| RFAAP | SWMU 51 | 51SC43 | 4.0 | 4.5 | TAWS | G9D080171 | 51SC43 | SS |
| RFAAP | SWMU 51 | 51SC43 | 4.0 | 4.5 | TAWS | G9D080171 | 51SC43 | SS |
| RFAAP | SWMU 51 | 51SC44 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC44 | SS |
| RFAAP | SWMU 51 | 51SC44 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC44 | SS |
| RFAAP | SWMU 51 | 51SC44 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC44 | SS |
| RFAAP | SWMU 51 | 51SC44 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC44 | SS |
| RFAAP | SWMU 51 | 51SC44 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC44 | SS |
| RFAAP | SWMU 51 | 51SC44 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC44 | SS |
| RFAAP | SWMU 51 | 51SC44 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC44 | SS |
| RFAAP | SWMU 51 | 51SC45 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC45 | SS |
| RFAAP | SWMU 51 | 51SC45 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC45 | SS |
| RFAAP | SWMU 51 | 51SC45 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC45 | SS |
| RFAAP | SWMU 51 | 51SC45 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC45 | SS |
| RFAAP | SWMU 51 | 51SC45 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC45 | SS |
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| RFAAP | SWMU 51 | 51SC45 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC45 | SS |
| RFAAP | SWMU 51 | 51SC46 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC46 | SS |
| RFAAP | SWMU 51 | 51SC46 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC46 | SS |
| RFAAP | SWMU 51 | 51SC46 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC46 | SS |
| RFAAP | SWMU 51 | 51SC46 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC46 | SS |
| RFAAP | SWMU 51 | 51SC46 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC46 | SS |
| RFAAP | SWMU 51 | 51SC46 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC46 | SS |
| RFAAP | SWMU 51 | 51SC46 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC46 | SS |
| RFAAP | SWMU 51 | 51SC47 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC47 | SS |
| RFAAP | SWMU 51 | 51SC47 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC47 | SS |
| RFAAP | SWMU 51 | 51SC47 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC47 | SS |
| RFAAP | SWMU 51 | 51SC47 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC47 | SS |
| RFAAP | SWMU 51 | 51SC47 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC47 | SS |
| RFAAP | SWMU 51 | 51SC47 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC47 | SS |
| RFAAP | SWMU 51 | 51SC47 | 10.0 | 10.5 | TAWS | G9D080171 | 51SC47 | SS |
| RFAAP | SWMU 51 | 51SC48 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC48 | SS |
| RFAAP | SWMU 51 | 51SC48 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC48 | SS |
| RFAAP | SWMU 51 | 51SC48 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC48 | SS |
| RFAAP | SWMU 51 | 51SC48 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC48 | SS |
| RFAAP | SWMU 51 | 51SC48 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC48 | SS |
| RFAAP | SWMU 51 | 51SC48 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC48 | SS |
| RFAAP | SWMU 51 | 51SC48 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC48 | SS |
| RFAAP | SWMU 51 | 51SC49 | 8.0 | 8.5 | TAWS | G9D080171 | 51SC49 | SS |
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| RFAAP | SWMU 51 | 51SC50 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC50 | SS |
| RFAAP | SWMU 51 | 51SC50 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC50 | SS |
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| RFAAP | SWMU 51 | 51SC50 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC50 | SS |
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|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU 51 | 51SC50 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC50 | SS |
| RFAAP | SWMU 51 | 51SC50 | 6.0 | 6.5 | TAWS | G9D080171 | 51SC50 | SS |
| RFAAP | SWMU 51 | 51SC51 | 4.0 | 4.5 | TAWS | G9D080171 | 51SC51 | SS |
| RFAAP | SWMU 51 | 51SC51 | 4.0 | 4.5 | TAWS | G9D080171 | 51SC51 | SS |
| RFAAP | SWMU 51 | 51SC51 | 4.0 | 4.5 | TAWS | G9D080171 | 51SC51 | SS |
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| RFAAP | SWMU 51 | 51SC51 | 4.0 | 4.5 | TAWS | G9D080171 | 51SC51 | SS |
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| RFAAP | SWMU 51 | 51SC51 | 4.0 | 4.5 | TAWS | G9D080171 | 51SC51 | SS |
| RFAAP | SWMU51 | 51SC52 | 8.0 | 8.5 | TAWS | G9E060194 | 51SC52 | SS |
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| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
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| G9C050192003 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |

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| G9C050192003 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192003 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192003 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192004 | D2216-90 | D 2216-90 | 03/04/09 | 03/05/09 | 03/06/09 | 03/09/09 |
| G9C050192004 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
| G9C050192004 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
| G9C050192004 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192004 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192004 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192004 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192004 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192004 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192004 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/07/09 |
| G9C050192005 | D2216-90 | D 2216-90 | 03/04/09 | 03/05/09 | 03/06/09 | 03/09/09 |
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| G9C050192007 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192007 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192007 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192007 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192007 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
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| G9C050192008 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
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| G9C050192008 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
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| G9C050192009 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192009 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192010 | D2216-90 | D 2216-90 | 03/04/09 | 03/05/09 | 03/06/09 | 03/09/09 |
| G9C050192010 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
| G9C050192010 | 3050B | 6010B | 03/04/09 | 03/05/09 | 03/09/09 | 03/09/09 |
| G9C050192010 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192010 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
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| G9C050192010 | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/08/09 |
| G9C050192010DI | 8330B | 8330 | 03/04/09 | 03/05/09 | 03/06/09 | 03/10/09 |
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| G9C110192001 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192001 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
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| G9C110192001 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
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| G9C110192003 | D2216-90 | D 2216-90 | 03/10/09 | 03/11/09 | 03/11/09 | 03/12/09 |
| G9C110192003 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192003 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192003 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
| G9C110192003 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
| G9C110192003 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
| G9C110192003 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
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| G9C110192003 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
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| G9C110192005 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192005 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
| G9C110192005 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
| G9C110192005DI | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
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| G9C110192005DI | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192005DI | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |

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| G9C110192010 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/13/09 |
| G9C110192011 | D2216-90 | D 2216-90 | 03/10/09 | 03/11/09 | 03/11/09 | 03/12/09 |
| G9C110192011 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192011 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192011 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
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| G9C110192011 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192011 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192011 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
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| G9C110192012 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192012 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192012 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192012 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192012 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192012 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192012 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192012 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192012 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
| G9C110192013 | D2216-90 | D 2216-90 | 03/10/09 | 03/11/09 | 03/11/09 | 03/12/09 |
| G9C110192013 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
| G9C110192013 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
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| G9C110192013 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
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| G9C110192014 | 3050B | 6010B | 03/10/09 | 03/11/09 | 03/12/09 | 03/12/09 |
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| G9C110192014 | 8330B | 8330 | 03/10/09 | 03/11/09 | 03/12/09 | 03/14/09 |
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| G9D080171002 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/10/09 |

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| G9D080171005 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
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| G9D080171005 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
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| G9D080171006 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
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| G9D080171008 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
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| G9D080171008 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
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| G9D080171009RI | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/13/09 | 04/15/09 |
| G9D080171009RI | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/13/09 | 04/15/09 |
| G9D080171009RI | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/13/09 | 04/15/09 |
| G9D080171009RI | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/13/09 | 04/15/09 |

| | | | | | | |
|---|---|---|---|---|---|---|
| G9D080171009RI | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/13/09 | 04/15/09 |
| G9D080171009RI | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/13/09 | 04/15/09 |
| G9D080171010 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
| G9D080171010 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
| G9D080171010 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
| G9D080171010 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
| G9D080171010 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
| G9D080171010 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
| G9D080171010 | 8330B | 8330 | 04/07/09 | 04/08/09 | 04/09/09 | 04/11/09 |
| G9E060194001 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194001 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194001 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194001 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194001 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194001 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194001 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194002 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194002 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194002 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194002 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194002 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194002 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |
| G9E060194002 | 8330B | 8330 | 05/05/09 | 05/06/09 | 05/07/09 | 05/08/09 |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 51207-31-9 | 2,3,7,8-TCDF | 1.4 | CON | J | J | PG/G | 1 |
| 57117-41-6 | 1,2,3,7,8-PeCDF | 6.0 | U | | U | PG/G | 1 |
| 57117-31-4 | 2,3,4,7,8-PeCDF | 0.51 | J | J | J | PG/G | 1 |
| 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.85 | J | J | J | PG/G | 1 |
| 60851-34-5 | 2,3,4,6,7,8-HxCDF | 6.0 | U | | U | PG/G | 1 |
| 72918-21-9 | 1,2,3,7,8,9-HxCDF | 6.0 | U | | U | PG/G | 1 |
| 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 2.5 | J | J | J | PG/G | 1 |
| 39001-02-0 | OCDF | 7.8 | J | J | J | PG/G | 1 |
| 55722-27-5 | Total TCDF | 3.5 | | | | PG/G | 1 |
| 30402-15-4 | Total PeCDF | 1.2 | | | | PG/G | 1 |
| 55684-94-1 | Total HxCDF | 3.3 | | | | PG/G | 1 |
| 38998-75-3 | Total HpCDF | 7.3 | | | | PG/G | 1 |
| 41903-57-5 | Total TCDD | 1.2 | U | | U | PG/G | 1 |
| 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U | PG/G | 1 |
| 36088-22-9 | Total PeCDD | 6.0 | U | | U | PG/G | 1 |
| 40321-76-4 | 1,2,3,7,8-PeCDD | 6.0 | U | | U | PG/G | 1 |
| 34465-46-8 | Total HxCDD | 3.6 | | | | PG/G | 1 |
| 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.45 | J JA | J | J | PG/G | 1 |
| 37871-00-4 | Total HpCDD | 48 | | | | PG/G | 1 |
| 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 26 | | | | PG/G | 1 |
| 3268-87-9 | OCDD | 2600 | B | | | PG/G | 1 |
| 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.34 | J | J | J | PG/G | 1 |
| 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 6.0 | U | | U | PG/G | 1 |
| 39227-28-6 | 1,2,3,4,7,8-HxCDD | 6.0 | U | | U | PG/G | 1 |
| 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.51 | J JA | J | J | PG/G | 1 |
| Q1028 | Percent Moisture | 18.1 | | | | % | 1 |
| 7439-92-1 | Lead | 10.8 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 17200 | | J | J | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.17 | J | J | J | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.11 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 2.1 | | J | J | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | UJ | UJ | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 0.99 |
| Q1028 | Percent Moisture | 16.8 | | | | % | 1 |
| 7439-92-1 | Lead | 14.7 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 19600 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 4.2 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.88 | J | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.21 | J | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.25 | J | J | J | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 9.2 | | | | MG/KG | 2 |
| Q1028 | Percent Moisture | 18.8 | | | | % | 1 |
| 7439-92-1 | Lead | 9.8 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 22300 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 1.3 | | | | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.39 | J | J | J | MG/KG | 0.99 |

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|---|---|---|---|---|---|---|---|
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 3.6 | | | | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.098 | J | J | J | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.11 | J | J | J | MG/KG | 0.99 |
| Q1028 | Percent Moisture | 18.0 | | | | % | 1 |
| 7439-92-1 | Lead | 11.0 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 21400 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.85 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.28 | J | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 3.0 | | | | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.14 | J | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.11 | J | J | J | MG/KG | 1 |
| Q1028 | Percent Moisture | 16.1 | | | | % | 1 |
| 7439-92-1 | Lead | 9.1 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 20100 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.048 | J | J | J | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.025 | J | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.13 | J | J | J | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.064 | J | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.044 | J | J | J | MG/KG | 1 |
| Q1028 | Percent Moisture | 8.7 | | | | % | 1 |
| 7439-92-1 | Lead | 6.4 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 12000 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.025 | J | J | J | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.044 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.38 | | | | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 0.99 |
| Q1028 | Percent Moisture | 13.1 | | | | % | 1 |
| 7439-92-1 | Lead | 12.5 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 20100 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.10 | J | J | J | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.072 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.30 | | J | J | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | UJ | UJ | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | UJ | UJ | MG/KG | 0.99 |
| Q1028 | Percent Moisture | 21.3 | | | | % | 1 |
| 7439-92-1 | Lead | 11.8 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 23300 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 3.4 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.63 | | K | K | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.49 | J | K | K | MG/KG | 0.99 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 121-14-2 | 2,4-Dinitrotoluene | 31 | | K | K | MG/KG | 4.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 21 | | K | K | MG/KG | 4.99 |
| Q1028 | Percent Moisture | 24.9 | | | | % | 1 |
| 7439-92-1 | Lead | 12.6 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 33600 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.64 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.26 | J | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 1.4 | | | | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.27 | | | | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.21 | J | J | J | MG/KG | 1 |
| Q1028 | Percent Moisture | 20.0 | | | | % | 1 |
| 7439-92-1 | Lead | 15.1 | | | | MG/KG | 1 |
| 7429-90-5 | Aluminum | 30500 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 5.0 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 1.4 | | K | K | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 1.6 | | K | K | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 20 | | K | K | MG/KG | 4.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 27 | | K | K | MG/KG | 4.99 |
| Q1028 | Percent Moisture | 19.9 | | | | % | 1 |
| 7439-92-1 | Lead | 17.2 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 29600 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.14 | J | J | J | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.10 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.050 | J | J | J | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.63 | | | | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.42 | J | J | J | MG/KG | 0.99 |
| Q1028 | Percent Moisture | 11.5 | | | | % | 1 |
| 7439-92-1 | Lead | 11.8 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 14900 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 4.8 | | K | K | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 1.1 | | K | K | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 4.2 | | K | K | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.60 | | K | K | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.79 | | K | K | MG/KG | 1 |
| Q1028 | Percent Moisture | 18.5 | | | | % | 1 |
| 7439-92-1 | Lead | 12.8 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 19200 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.41 | | K | K | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 1.1 | | K | K | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 780 | | | | MG/KG | 500 |
| 606-20-2 | 2,6-Dinitrotoluene | 220 | | | | MG/KG | 500 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 1300 | | | | MG/KG | 500 |
| 88-72-2 | 2-Nitrotoluene | 170 | | | | MG/KG | 500 |
| 99-99-0 | 4-Nitrotoluene | 120 | J | J | J | MG/KG | 500 |

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|---|---|---|---|---|---|---|---|
| 51207-31-9 | 2,3,7,8-TCDF | 2.2 | CON | | | PG/G | 1 |
| 57117-41-6 | 1,2,3,7,8-PeCDF | 0.49 | J | J | J | PG/G | 1 |
| 57117-31-4 | 2,3,4,7,8-PeCDF | 1.3 | J | J | J | PG/G | 1 |
| 70648-26-9 | 1,2,3,4,7,8-HxCDF | 1.6 | J | J | J | PG/G | 1 |
| 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.61 | J | J | J | PG/G | 1 |
| 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.23 | J | J | J | PG/G | 1 |
| 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 10 | | | | PG/G | 1 |
| 39001-02-0 | OCDF | 28 | B | | | PG/G | 1 |
| 55722-27-5 | Total TCDF | 8.2 | | | | PG/G | 1 |
| 30402-15-4 | Total PeCDF | 6.1 | | | | PG/G | 1 |
| 55684-94-1 | Total HxCDF | 12 | | | | PG/G | 1 |
| 38998-75-3 | Total HpCDF | 29 | | | | PG/G | 1 |
| 41903-57-5 | Total TCDD | 0.14 | | | | PG/G | 1 |
| 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U | PG/G | 1 |
| 36088-22-9 | Total PeCDD | 0.26 | | | | PG/G | 1 |
| 40321-76-4 | 1,2,3,7,8-PeCDD | 6.2 | U | | U | PG/G | 1 |
| 34465-46-8 | Total HxCDD | 9.7 | | | | PG/G | 1 |
| 19408-74-3 | 1,2,3,7,8,9-HxCDD | 1.4 | J B | J | J | PG/G | 1 |
| 37871-00-4 | Total HpCDD | 110 | | | | PG/G | 1 |
| 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 61 | B | | | PG/G | 1 |
| 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.51 | J | J | J | PG/G | 1 |
| 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.77 | J | J | J | PG/G | 1 |
| 39227-28-6 | 1,2,3,4,7,8-HxCDD | 6.2 | U | | U | PG/G | 1 |
| 57653-85-7 | 1,2,3,6,7,8-HxCDD | 1.6 | J | J | J | PG/G | 1 |
| 3268-87-9 | OCDD | 5900 | B | | | PG/G | 10 |
| Q1028 | Percent Moisture | 19.6 | | | | % | 1 |
| 7439-92-1 | Lead | 37.9 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 19000 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.40 | | K | K | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.54 | | K | K | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 750 | | | | MG/KG | 498 |
| 606-20-2 | 2,6-Dinitrotoluene | 210 | | | | MG/KG | 498 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 990 | | | | MG/KG | 498 |
| 88-72-2 | 2-Nitrotoluene | 240 | | | | MG/KG | 498 |
| 99-99-0 | 4-Nitrotoluene | 170 | J | J | J | MG/KG | 498 |
| Q1028 | Percent Moisture | 18.5 | | | | % | 1 |
| 7439-92-1 | Lead | 45.8 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 18600 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 5.6 | | K | K | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 2.6 | PG | J | J | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 1.8 | PG | J | J | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 10 | | | | MG/KG | 9.99 |
| 55-63-0 | Nitroglycerin | 20 | | | | MG/KG | 9.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 70 | | | | MG/KG | 9.99 |
| Q1028 | Percent Moisture | 19.4 | | | | % | 1 |
| 7439-92-1 | Lead | 22.8 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 32700 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.34 | | | | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.21 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |

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|---|---|---|---|---|---|---|---|
| 118-96-7 | 2,4,6-Trinitrotoluene | 1.7 | | | | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 1.1 | | | | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.78 | | | | MG/KG | 0.99 |
| Q1028 | Percent Moisture | 15.3 | | | | % | 1 |
| 7439-92-1 | Lead | 14.6 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 24600 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.43 | | | | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.20 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.40 | | | | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 1.4 | | | | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.89 | | | | MG/KG | 0.99 |
| Q1028 | Percent Moisture | 14.7 | | | | % | 1 |
| 7439-92-1 | Lead | 10.4 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 18300 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 2.1 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.69 | | | | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 1.6 | | | | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 1.2 | | | | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.85 | | | | MG/KG | 1 |
| Q1028 | Percent Moisture | 18.9 | | | | % | 1 |
| 7439-92-1 | Lead | 20.4 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 32100 | | J | J | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 1.7 | | J | J | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.78 | | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.52 | | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.45 | J | K | K | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 9.5 | | J | J | MG/KG | 5 |
| Q1028 | Percent Moisture | 18.0 | | | | % | 1 |
| 7439-92-1 | Lead | 10.8 | | J | J | MG/KG | 1 |
| 7429-90-5 | Aluminum | 25300 | | | | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 3.0 | | J | J | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.86 | | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.46 | | J | J | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.56 | | J | J | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 8.9 | | J | J | MG/KG | 4.97 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | UL | UL | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.19 | J | L | L | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.10 | J | L | L | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.50 | | J | J | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.042 | J | J | J | MG/KG | 0.99 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 606-20-2 | 2,6-Dinitrotoluene | 0.016 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.072 | J | J | J | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 0.99 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.025 | J | J | J | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.25 | U | | U | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.14 | J | J | J | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 0.99 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.030 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 3.8 | | | | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 2.8 | | | | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 37 | | | | MG/KG | 19.98 |
| 606-20-2 | 2,6-Dinitrotoluene | 15 | | | | MG/KG | 19.98 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 120 | | | | MG/KG | 19.98 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 2.9 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 6.0 | | | | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 4.0 | | | | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.60 | | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 1.2 | | J | J | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 870 | | | | MG/KG | 200.2 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.021 | J | J | J | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.022 | J PG | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.57 | | J | J | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.087 | J | J | J | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.044 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.091 | J | J | J | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 0.99 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.096 | J | J | J | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.053 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 2.0 | | | | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 0.99 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.025 | J | J | J | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.012 | J | J | J | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.24 | J | J | J | MG/KG | 0.99 |

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|---|---|---|---|---|---|---|---|
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U | MG/KG | 0.99 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 3.3 | | | | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.66 | | J | J | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 3.8 | | | | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.12 | J | J | J | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.11 | J | J | J | MG/KG | 1 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | UL | UL | MG/KG | 0.99 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.22 | J | L | L | MG/KG | 0.99 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.063 | J | L | L | MG/KG | 0.99 |
| 55-63-0 | Nitroglycerin | 0.50 | U | UL | UL | MG/KG | 0.99 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.27 | | L | L | MG/KG | 0.99 |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | UL | UL | MG/KG | 0.99 |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | UL | UL | MG/KG | 0.99 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | UL | UL | MG/KG | 1 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.25 | | L | L | MG/KG | 1 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.12 | J | L | L | MG/KG | 1 |
| 55-63-0 | Nitroglycerin | 0.50 | U | UL | UL | MG/KG | 1 |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.89 | | L | L | MG/KG | 1 |
| 88-72-2 | 2-Nitrotoluene | 0.040 | J | L | L | MG/KG | 1 |
| 99-99-0 | 4-Nitrotoluene | 0.050 | J | L | L | MG/KG | 1 |

| MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|
| 0.57 | 1.2 | PP01 | N | T | D | 18 |
| 0.35 | 6.0 | PP01 | N | T | D | 18 |
| 0.38 | 6.0 | PP01 | N | T | D | 18 |
| 0.31 | 6.0 | PP01 | N | T | D | 18 |
| 0.29 | 6.0 | PP01 | N | T | D | 18 |
| 0.32 | 6.0 | PP01 | N | T | D | 18 |
| 0.29 | 6.0 | PP01 | N | T | D | 18 |
| 0.44 | 12 | PP01 | N | T | D | 18 |
| 0.21 | 1.2 | PP01 | N | T | D | 18 |
| 0.37 | 6.0 | PP01 | N | T | D | 18 |
| 0.29 | 6.0 | PP01 | N | T | D | 18 |
| 0.32 | 6.0 | PP01 | N | T | D | 18 |
| 0.33 | 1.2 | PP01 | N | T | D | 18 |
| 0.33 | 1.2 | PP01 | N | T | D | 18 |
| 0.62 | 6.0 | PP01 | N | T | D | 18 |
| 0.62 | 6.0 | PP01 | N | T | D | 18 |
| 0.39 | 6.0 | PP01 | N | T | D | 18 |
| 0.37 | 6.0 | PP01 | N | T | D | 18 |
| 0.73 | 6.0 | PP01 | N | T | D | 18 |
| 0.73 | 6.0 | PP01 | N | T | D | 18 |
| 5.7 | 12 | PP01 | N | T | D | 18 |
| 0.24 | 6.0 | PP01 | N | T | D | 18 |
| 0.34 | 6.0 | PP01 | N | T | D | 18 |
| 0.48 | 6.0 | PP01 | N | T | D | 18 |
| 0.35 | 6.0 | PP01 | N | T | D | 18 |
| 0.1 | 0.1 | PP01 | N | T | W | 18 |
| 0.73 | 2.4 | PP01 | N | T | D | 18 |
| 8.5 | 25.6 | PP01 | N | T | D | 18 |
| 0.004 | 0.25 | PP02 | N | T | W | 18 |
| 0.005 | 0.25 | PP02 | N | T | W | 18 |
| 0.007 | 1.2 | PP02 | N | T | W | 18 |
| 0.015 | 0.50 | PP02 | N | T | W | 18 |
| 0.019 | 0.25 | PP02 | N | T | W | 18 |
| 0.013 | 0.25 | PP02 | N | T | W | 18 |
| 0.018 | 0.50 | PP02 | N | T | W | 18 |
| 0.1 | 0.1 | PP01 | N | T | W | 17 |
| 0.72 | 2.4 | PP01 | N | T | D | 17 |
| 8.4 | 25.2 | PP01 | N | T | D | 17 |
| 0.004 | 0.25 | PP01 | N | T | W | 17 |
| 0.005 | 0.25 | PP01 | N | T | W | 17 |
| 0.007 | 1.2 | PP01 | N | T | W | 17 |
| 0.015 | 0.50 | PP01 | N | T | W | 17 |
| 0.013 | 0.25 | PP01 | N | T | W | 17 |
| 0.018 | 0.50 | PP01 | N | T | W | 17 |
| 0.039 | 0.50 | PP02 | N | T | W | 17 |
| 0.1 | 0.1 | PP01 | N | T | W | 19 |
| 0.74 | 2.5 | PP01 | N | T | D | 19 |
| 8.6 | 25.9 | PP01 | N | T | D | 19 |
| 0.004 | 0.25 | PP01 | N | T | W | 19 |
| 0.005 | 0.25 | PP01 | N | T | W | 19 |
| 0.007 | 1.2 | PP01 | N | T | W | 19 |

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|---|---|---|---|---|---|---|
| 0.015 | 0.50 | PP01 | N | T | W | 19 |
| 0.019 | 0.25 | PP01 | N | T | W | 19 |
| 0.013 | 0.25 | PP01 | N | T | W | 19 |
| 0.018 | 0.50 | PP01 | N | T | W | 19 |
| 0.1 | 0.1 | PP01 | N | T | W | 18 |
| 0.73 | 2.4 | PP01 | N | T | D | 18 |
| 8.5 | 25.6 | PP01 | N | T | D | 18 |
| 0.004 | 0.25 | PP01 | N | T | W | 18 |
| 0.005 | 0.25 | PP01 | N | T | W | 18 |
| 0.007 | 1.2 | PP01 | N | T | W | 18 |
| 0.015 | 0.50 | PP01 | N | T | W | 18 |
| 0.019 | 0.25 | PP01 | N | T | W | 18 |
| 0.013 | 0.25 | PP01 | N | T | W | 18 |
| 0.018 | 0.50 | PP01 | N | T | W | 18 |
| 0.1 | 0.1 | PP01 | N | T | W | 16 |
| 0.72 | 2.4 | PP01 | N | T | D | 16 |
| 8.3 | 25 | PP01 | N | T | D | 16 |
| 0.004 | 0.25 | PP02 | N | T | W | 16 |
| 0.005 | 0.25 | PP02 | N | T | W | 16 |
| 0.007 | 1.2 | PP02 | N | T | W | 16 |
| 0.015 | 0.50 | PP02 | N | T | W | 16 |
| 0.019 | 0.25 | PP02 | N | T | W | 16 |
| 0.013 | 0.25 | PP02 | N | T | W | 16 |
| 0.018 | 0.50 | PP02 | N | T | W | 16 |
| 0.1 | 0.1 | PP01 | N | T | W | 8.7 |
| 0.66 | 2.2 | PP01 | N | T | D | 8.7 |
| 7.7 | 23 | PP01 | N | T | D | 8.7 |
| 0.004 | 0.25 | PP02 | N | T | W | 8.7 |
| 0.005 | 0.25 | PP02 | N | T | W | 8.7 |
| 0.007 | 1.2 | PP02 | N | T | W | 8.7 |
| 0.015 | 0.50 | PP02 | N | T | W | 8.7 |
| 0.019 | 0.25 | PP02 | N | T | W | 8.7 |
| 0.013 | 0.25 | PP02 | N | T | W | 8.7 |
| 0.018 | 0.50 | PP02 | N | T | W | 8.7 |
| 0.1 | 0.1 | PP01 | N | T | W | 13 |
| 0.69 | 2.3 | PP01 | N | T | D | 13 |
| 8.1 | 24.2 | PP01 | N | T | D | 13 |
| 0.004 | 0.25 | PP01 | N | T | W | 13 |
| 0.005 | 0.25 | PP01 | N | T | W | 13 |
| 0.007 | 1.2 | PP01 | N | T | W | 13 |
| 0.015 | 0.50 | PP01 | N | T | W | 13 |
| 0.019 | 0.25 | PP01 | N | T | W | 13 |
| 0.013 | 0.25 | PP01 | N | T | W | 13 |
| 0.018 | 0.50 | PP01 | N | T | W | 13 |
| 0.1 | 0.1 | PP01 | N | T | W | 21 |
| 0.76 | 2.5 | PP01 | N | T | D | 21 |
| 8.9 | 26.7 | PP01 | N | T | D | 21 |
| 0.004 | 0.25 | PP01 | N | T | W | 21 |
| 0.007 | 1.2 | PP01 | N | T | W | 21 |
| 0.015 | 0.50 | PP01 | N | T | W | 21 |
| 0.013 | 0.25 | PP01 | N | T | W | 21 |
| 0.018 | 0.50 | PP01 | N | T | W | 21 |

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|---|---|---|---|---|---|---|
| 0.026 | 1.2 | PP02 | N | T | W | 21 |
| 0.097 | 1.2 | PP02 | N | T | W | 21 |
| 0.1 | 0.1 | PP01 | N | T | W | 25 |
| 0.80 | 2.7 | PP01 | N | T | D | 25 |
| 9.3 | 28 | PP01 | N | T | D | 25 |
| 0.004 | 0.25 | PP01 | N | T | W | 25 |
| 0.005 | 0.25 | PP01 | N | T | W | 25 |
| 0.007 | 1.2 | PP01 | N | T | W | 25 |
| 0.015 | 0.50 | PP01 | N | T | W | 25 |
| 0.019 | 0.25 | PP01 | N | T | W | 25 |
| 0.013 | 0.25 | PP01 | N | T | W | 25 |
| 0.018 | 0.50 | PP01 | N | T | W | 25 |
| 0.1 | 0.1 | PP01 | N | T | W | 20 |
| 0.75 | 2.5 | PP01 | N | T | D | 20 |
| 8.8 | 26.3 | PP01 | N | T | D | 20 |
| 0.004 | 0.25 | PP01 | N | T | W | 20 |
| 0.007 | 1.2 | PP01 | N | T | W | 20 |
| 0.015 | 0.50 | PP01 | N | T | W | 20 |
| 0.013 | 0.25 | PP01 | N | T | W | 20 |
| 0.018 | 0.50 | PP01 | N | T | W | 20 |
| 0.026 | 1.2 | PP02 | N | T | W | 20 |
| 0.097 | 1.2 | PP02 | N | T | W | 20 |
| 0.1 | 0.1 | PP01 | N | T | W | 20 |
| 0.75 | 2.5 | PP01 | N | T | D | 20 |
| 8.7 | 26.2 | PP01 | N | T | D | 20 |
| 0.004 | 0.25 | PP01 | N | T | W | 20 |
| 0.005 | 0.25 | PP01 | N | T | W | 20 |
| 0.007 | 0.25 | PP01 | N | T | W | 20 |
| 0.015 | 0.50 | PP01 | N | T | W | 20 |
| 0.019 | 0.25 | PP01 | N | T | W | 20 |
| 0.013 | 0.25 | PP01 | N | T | W | 20 |
| 0.018 | 0.50 | PP01 | N | T | W | 20 |
| 0.1 | 0.1 | PP01 | N | T | W | 12 |
| 0.68 | 2.3 | PP01 | N | T | D | 12 |
| 7.9 | 23.7 | PP01 | N | T | D | 12 |
| 0.004 | 0.25 | PP01 | N | T | W | 12 |
| 0.005 | 0.25 | PP01 | N | T | W | 12 |
| 0.007 | 0.25 | PP01 | N | T | W | 12 |
| 0.015 | 0.50 | PP01 | N | T | W | 12 |
| 0.019 | 0.25 | PP01 | N | T | W | 12 |
| 0.013 | 0.25 | PP01 | N | T | W | 12 |
| 0.018 | 0.50 | PP01 | N | T | W | 12 |
| 0.1 | 0.1 | PP01 | N | T | W | 18 |
| 0.74 | 2.5 | PP01 | N | T | D | 18 |
| 8.6 | 25.8 | PP01 | N | T | D | 18 |
| 0.004 | 0.25 | PP01 | N | T | W | 18 |
| 0.015 | 0.50 | PP01 | N | T | W | 18 |
| 2.6 | 120 | PP02 | N | T | W | 18 |
| 3.6 | 120 | PP02 | N | T | W | 18 |
| 9.7 | 120 | PP02 | N | T | W | 18 |
| 6.5 | 120 | PP02 | N | T | W | 18 |
| 9.1 | 250 | PP02 | N | T | W | 18 |

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|---|---|---|---|---|---|---|
| 0.26 | 1.2 | PP01 | N | T | D | 20 |
| 0.027 | 6.2 | PP01 | N | T | D | 20 |
| 0.029 | 6.2 | PP01 | N | T | D | 20 |
| 0.044 | 6.2 | PP01 | N | T | D | 20 |
| 0.039 | 6.2 | PP01 | N | T | D | 20 |
| 0.045 | 6.2 | PP01 | N | T | D | 20 |
| 0.1 | 6.2 | PP01 | N | T | D | 20 |
| 0.11 | 12 | PP01 | N | T | D | 20 |
| 0.047 | 1.2 | PP01 | N | T | D | 20 |
| 0.027 | 6.2 | PP01 | N | T | D | 20 |
| 0.040 | 6.2 | PP01 | N | T | D | 20 |
| 0.11 | 6.2 | PP01 | N | T | D | 20 |
| 0.042 | 1.2 | PP01 | N | T | D | 20 |
| 0.16 | 1.2 | PP01 | N | T | D | 20 |
| 0.14 | 6.2 | PP01 | N | T | D | 20 |
| 0.20 | 6.2 | PP01 | N | T | D | 20 |
| 0.078 | 6.2 | PP01 | N | T | D | 20 |
| 0.072 | 6.2 | PP01 | N | T | D | 20 |
| 0.24 | 6.2 | PP01 | N | T | D | 20 |
| 0.24 | 6.2 | PP01 | N | T | D | 20 |
| 0.035 | 6.2 | PP01 | N | T | D | 20 |
| 0.12 | 6.2 | PP01 | N | T | D | 20 |
| 0.66 | 6.2 | PP01 | N | T | D | 20 |
| 0.073 | 6.2 | PP01 | N | T | D | 20 |
| 3.4 | 120 | PP02 | N | T | D | 20 |
| 0.1 | 0.1 | PP01 | N | T | W | 20 |
| 0.75 | 2.5 | PP01 | N | T | D | 20 |
| 8.7 | 26.1 | PP01 | N | T | D | 20 |
| 0.004 | 0.25 | PP01 | N | T | W | 20 |
| 0.015 | 0.50 | PP01 | N | T | W | 20 |
| 2.6 | 120 | PP02 | N | T | W | 20 |
| 3.6 | 120 | PP02 | N | T | W | 20 |
| 9.7 | 120 | PP02 | N | T | W | 20 |
| 6.5 | 120 | PP02 | N | T | W | 20 |
| 9.1 | 250 | PP02 | N | T | W | 20 |
| 0.1 | 0.1 | PP01 | N | T | W | 19 |
| 0.74 | 2.5 | PP01 | N | T | D | 19 |
| 8.6 | 25.8 | PP01 | N | T | D | 19 |
| 0.004 | 0.25 | PP01 | N | T | W | 19 |
| 0.007 | 0.25 | PP01 | N | T | W | 19 |
| 0.013 | 0.25 | PP01 | N | T | W | 19 |
| 0.018 | 0.50 | PP01 | N | T | W | 19 |
| 0.053 | 2.5 | PP03 | N | T | W | 19 |
| 0.15 | 5.0 | PP03 | N | T | W | 19 |
| 0.19 | 2.5 | PP03 | N | T | W | 19 |
| 0.1 | 0.1 | PP01 | N | T | W | 19 |
| 0.74 | 2.5 | PP01 | N | T | D | 19 |
| 8.7 | 26 | PP01 | N | T | D | 19 |
| 0.004 | 0.25 | PP01 | N | T | W | 19 |
| 0.005 | 0.25 | PP01 | N | T | W | 19 |
| 0.007 | 0.25 | PP01 | N | T | W | 19 |
| 0.015 | 0.50 | PP01 | N | T | W | 19 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.019 | 0.25 | PP01 | N | T | W | 19 |
| 0.013 | 0.25 | PP01 | N | T | W | 19 |
| 0.018 | 0.50 | PP01 | N | T | W | 19 |
| 0.1 | 0.1 | PP01 | N | T | W | 15 |
| 0.71 | 2.4 | PP01 | N | T | D | 15 |
| 8.3 | 24.8 | PP01 | N | T | D | 15 |
| 0.004 | 0.25 | PP01 | N | T | W | 15 |
| 0.005 | 0.25 | PP01 | N | T | W | 15 |
| 0.007 | 0.25 | PP01 | N | T | W | 15 |
| 0.015 | 0.50 | PP01 | N | T | W | 15 |
| 0.019 | 0.25 | PP01 | N | T | W | 15 |
| 0.013 | 0.25 | PP01 | N | T | W | 15 |
| 0.018 | 0.50 | PP01 | N | T | W | 15 |
| 0.1 | 0.1 | PP01 | N | T | W | 15 |
| 0.70 | 2.3 | PP01 | N | T | D | 15 |
| 8.2 | 24.6 | PP01 | N | T | D | 15 |
| 0.004 | 0.25 | PP01 | N | T | W | 15 |
| 0.005 | 0.25 | PP01 | N | T | W | 15 |
| 0.007 | 0.25 | PP01 | N | T | W | 15 |
| 0.015 | 0.50 | PP01 | N | T | W | 15 |
| 0.019 | 0.25 | PP01 | N | T | W | 15 |
| 0.013 | 0.25 | PP01 | N | T | W | 15 |
| 0.018 | 0.50 | PP01 | N | T | W | 15 |
| 0.1 | 0.1 | PP01 | N | T | W | 19 |
| 0.74 | 2.5 | PP01 | N | T | D | 19 |
| 8.6 | 25.9 | PP01 | N | T | D | 19 |
| 0.004 | 0.25 | PP01 | N | T | W | 19 |
| 0.005 | 0.25 | PP01 | N | T | W | 19 |
| 0.007 | 0.25 | PP01 | N | T | W | 19 |
| 0.015 | 0.50 | PP01 | N | T | W | 19 |
| 0.013 | 0.25 | PP01 | N | T | W | 19 |
| 0.018 | 0.50 | PP01 | N | T | W | 19 |
| 0.097 | 1.2 | PP03 | N | T | W | 19 |
| 0.1 | 0.1 | PP01 | N | T | W | 18 |
| 0.73 | 2.4 | PP01 | N | T | D | 18 |
| 8.5 | 25.6 | PP01 | N | T | D | 18 |
| 0.004 | 0.25 | PP01 | N | T | W | 18 |
| 0.005 | 0.25 | PP01 | N | T | W | 18 |
| 0.007 | 0.25 | PP01 | N | T | W | 18 |
| 0.015 | 0.50 | PP01 | N | T | W | 18 |
| 0.013 | 0.25 | PP01 | N | T | W | 18 |
| 0.018 | 0.50 | PP01 | N | T | W | 18 |
| 0.096 | 1.2 | PP03 | N | T | W | 18 |
| 0.0040 | 0.25 | PP01 | N | T | W | 100 |
| 0.0050 | 0.25 | PP01 | N | T | W | 100 |
| 0.0070 | 0.25 | PP01 | N | T | W | 100 |
| 0.015 | 0.50 | PP01 | N | T | W | 100 |
| 0.019 | 0.25 | PP01 | N | T | W | 100 |
| 0.013 | 0.25 | PP01 | N | T | W | 100 |
| 0.018 | 0.50 | PP01 | N | T | W | 100 |
| 0.0040 | 0.25 | PP01 | N | T | W | 100 |
| 0.0050 | 0.25 | PP01 | N | T | W | 100 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.0070 | 0.25 | PP01 | N | T | W | 100 |
| 0.015 | 0.50 | PP01 | N | T | W | 100 |
| 0.019 | 0.25 | PP01 | N | T | W | 100 |
| 0.013 | 0.25 | PP01 | N | T | W | 100 |
| 0.018 | 0.50 | PP01 | N | T | W | 100 |
| 0.0040 | 0.25 | PP01 | N | T | W | 100 |
| 0.0050 | 0.25 | PP01 | N | T | W | 100 |
| 0.0070 | 0.25 | PP01 | N | T | W | 100 |
| 0.015 | 0.50 | PP01 | N | T | W | 100 |
| 0.019 | 0.25 | PP01 | N | T | W | 100 |
| 0.013 | 0.25 | PP01 | N | T | W | 100 |
| 0.018 | 0.50 | PP01 | N | T | W | 100 |
| 0.0040 | 0.25 | PP01 | N | T | W | 100 |
| 0.015 | 0.50 | PP01 | N | T | W | 100 |
| 0.013 | 0.25 | PP01 | N | T | W | 100 |
| 0.018 | 0.50 | PP01 | N | T | W | 100 |
| 0.11 | 5.0 | PP02 | N | T | W | 100 |
| 0.15 | 5.0 | PP02 | N | T | W | 100 |
| 0.39 | 5.0 | PP02 | N | T | W | 100 |
| 0.0040 | 0.25 | PP01 | N | T | W | 100 |
| 0.0050 | 0.25 | PP01 | N | T | W | 100 |
| 0.0070 | 0.25 | PP01 | N | T | W | 100 |
| 0.015 | 0.50 | PP01 | N | T | W | 100 |
| 0.013 | 0.25 | PP01 | N | T | W | 100 |
| 0.018 | 0.50 | PP01 | N | T | W | 100 |
| 3.9 | 50 | PP02 | N | T | W | 100 |
| 0.0040 | 0.25 | PP01 | N | T | W | 100 |
| 0.0050 | 0.25 | PP01 | N | T | W | 100 |
| 0.0070 | 0.25 | PP01 | N | T | W | 100 |
| 0.015 | 0.50 | PP01 | N | T | W | 100 |
| 0.019 | 0.25 | PP01 | N | T | W | 100 |
| 0.013 | 0.25 | PP01 | N | T | W | 100 |
| 0.018 | 0.50 | PP01 | N | T | W | 100 |
| 0.0040 | 0.25 | PP01 | N | T | W | 100 |
| 0.0050 | 0.25 | PP01 | N | T | W | 100 |
| 0.0070 | 0.25 | PP01 | N | T | W | 100 |
| 0.015 | 0.50 | PP01 | N | T | W | 100 |
| 0.019 | 0.25 | PP01 | N | T | W | 100 |
| 0.013 | 0.25 | PP01 | N | T | W | 100 |
| 0.018 | 0.50 | PP01 | N | T | W | 100 |
| 0.0040 | 0.25 | PP01 | N | T | W | 100 |
| 0.0050 | 0.25 | PP01 | N | T | W | 100 |
| 0.0070 | 0.25 | PP01 | N | T | W | 100 |
| 0.015 | 0.50 | PP01 | N | T | W | 100 |
| 0.019 | 0.25 | PP01 | N | T | W | 100 |
| 0.013 | 0.25 | PP01 | N | T | W | 100 |
| 0.018 | 0.50 | PP01 | N | T | W | 100 |
| 0.0040 | 0.25 | PP02 | N | T | W | 100 |
| 0.0050 | 0.25 | PP02 | N | T | W | 100 |
| 0.0070 | 0.25 | PP02 | N | T | W | 100 |
| 0.015 | 0.50 | PP02 | N | T | W | 100 |
| 0.019 | 0.25 | PP02 | N | T | W | 100 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.013 | 0.25 | PP02 | N | T | W | 100 |
| 0.018 | 0.50 | PP02 | N | T | W | 100 |
| 0.0040 | 0.25 | PP01 | N | T | W | 100 |
| 0.0050 | 0.25 | PP01 | N | T | W | 100 |
| 0.0070 | 0.25 | PP01 | N | T | W | 100 |
| 0.015 | 0.50 | PP01 | N | T | W | 100 |
| 0.019 | 0.25 | PP01 | N | T | W | 100 |
| 0.013 | 0.25 | PP01 | N | T | W | 100 |
| 0.018 | 0.50 | PP01 | N | T | W | 100 |
| 0.004 | 0.25 | PP01 | N | T | W | NA |
| 0.005 | 0.25 | PP01 | N | T | W | NA |
| 0.007 | 0.25 | PP01 | N | T | W | NA |
| 0.015 | 0.50 | PP01 | N | T | W | NA |
| 0.019 | 0.25 | PP01 | N | T | W | NA |
| 0.013 | 0.25 | PP01 | N | T | W | NA |
| 0.018 | 0.50 | PP01 | N | T | W | NA |
| 0.004 | 0.25 | PP01 | N | T | W | NA |
| 0.005 | 0.25 | PP01 | N | T | W | NA |
| 0.007 | 0.25 | PP01 | N | T | W | NA |
| 0.015 | 0.50 | PP01 | N | T | W | NA |
| 0.019 | 0.25 | PP01 | N | T | W | NA |
| 0.013 | 0.25 | PP01 | N | T | W | NA |
| 0.018 | 0.50 | PP01 | N | T | W | NA |

# SOLID, 1311/8270C, TCLP 2,4-DNT

**Shaw E & I Inc**

**Client Sample ID: 5IDW02**

**TCLP GC/MS Semivolatiles**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9A020131-001 | **Work Order #...:** | K5E0H1AC | **Matrix.....:** | SO |
| **Date Sampled...:** | 12/30/08 | **Date Received..:** | 01/02/09 | | |
| **Leach Date.....:** | 01/05/09 | **Prep Date.....:** | 01/06/09 | **Analysis Date..:** | 01/09/09 |
| **Leach Batch #..:** | P900606 | **Prep Batch #...:** | 9006118 | | |
| **Dilution Factor:** | 500 | | | | |
| **% Moisture.....:** | | **Method.....:** | SW846 8270C | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **170000 Q** | **25000** | **ug/L** | **12000** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Fluorobiphenyl | 0.0 SRD | (37 - 107) |
| 2-Fluorophenol | 0.0 SRD | (12 - 91 ) |
| Nitrobenzene-d5 | 0.0 SRD | (46 - 103) |
| Phenol-d5 | 0.0 SRD | (10 - 71 ) |
| Terphenyl-d14 | 0.0 SRD | (66 - 124) |
| 2,4,6-Tribromophenol | 0.0 SRD | (28 - 128) |

**NOTE(S):**

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

# Appendix B-2

# Data Validation Reports

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Explosives
Test America Laboratories, Inc., SDG G9A120120

**DATE:** April 1, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on January 09, 2009. Solid samples were analyzed for explosives using USEPA SW-846 8330B. A total of two solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51DW05 | G9A120120-001 | 51DW06 | G9A120120-002 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | System Monitoring Compounds |
| | X | Laboratory Control Sample |
| X | | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

4/1/09

Date

**RFAAP VALIDATION REPORT**
**EXPLOSIVES REVIEW**
**SDG G9A120120**

**I-Holding Times and Preservation**

The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, explosive compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 01/09/09, the coolers were received by the primary laboratory (Test America) on 01/12/09 at 6.0°C, 6.0°C, and 6.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 01/09/09. For the solid samples, the explosives were extracted on 01/14/09 and analyzed on 01/16/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**

The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. No contaminants should be present in the blanks. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5x) the maximum amount for explosive target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 01/16/09 | G9A140000-299 | All target explosives <½MRL | NA | NA | None |

MRL = Method Reporting Limit
NA = Not Applicable

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5-point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. The DoD QSM specifies that the correlation coefficient must be ≥0.995 and/or the percent relative standard deviation (%RSD) must be ≤20%. All detects were qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For the explosives initial calibration performed on 09/27/08 on instrument LC10.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this initial calibration.

- For the explosives initial calibration performed on 09/26/08 on instrument LC9.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Confirmations for samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this initial calibration.

**IV-Continuing Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. Continuing calibration standards are analyzed after every 10 injections, and at the end of the analysis sequence. The DoD QSM specifies that the percent difference (%D) from initial calibration should be no greater than ±20%. All detects were qualified as estimated "J" for where there were exceeding %Ds, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For explosives initial calibration verification performed on 09/27/08 @21:28 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No samples reported apply to this initial verification calibration.

- For explosives continuing calibration performed on 01/16/09 @03:59 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this continuing calibration.

- For explosives continuing calibration performed on 01/16/09 @09:53 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No samples reported apply to this continuing calibration.

- For explosives initial calibration verification performed on 09/27/08 @14:26 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this initial verification calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 01/16/09 @06:46 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this continuing calibration.

- For explosives continuing calibration performed on 01/16/09 @10:54 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied.

**V-System Monitoring Compound (Surrogates)**
Laboratory performance on individual samples is established by means of spiking activities. The percent recovery (%R) for all samples and blanks must be within the laboratory control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria: 3,4-dinitrotoluene (81-127%)

- All criteria were met. No qualifiers were applied.

**VI-Laboratory Control Sample**
Laboratory control samples (LCS) are used to monitor long-term accuracy of the analytical method. The analysis is performed at a frequency of 1 per analytical batch. The percent recoveries (%Rs) must be within the laboratory control limits. DoD QSM solid LCS recovery limits are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9A140000-299 was used as solid LCS for explosives analyzed on 01/16/09. All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the laboratory control limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 51DW05 (G9A120120-001) was used as the solid MS/MSD for the explosive analysis on 01/16/09. 2,4,6-Trinitrotoluene (168%; RPD=33%) and PETN (118%) were outside DoD QSM criteria and/or laboratory criteria. The spiked sample was qualified estimated "J" for detects and no qualifier for non-detects for 2,4,6-trinitrotoluene and PETN based upon these outliers. The associated LCS (Section VI) was within criteria. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this MS/MSD.

**VIII-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**IX-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The calculation was based calibration factors. The absolute percent difference (%D) between the calculated and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns.

- All values >MDL and <MRL or <3*MDL (whichever was greater) were qualified as estimated "J".

- For sample 51DW06 (G9A120120-002), 2,4-dinitrotoluene, nitrobenzene, 2,4,6-trinitrotoluene, 2-nitrotoluene, and 4-amino-2,6-dinitrotoluenewere were outside the percent difference criteria between the primary and secondary columns and were qualified estimated "J" based upon these outliers.

- For all other explosive confirmations, all criteria were met.

**Sample: 51DW05 (G9A120120-001), 2,4,6-trinitrotoluene**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Vt = Volume of total extract (mL).
CF = Average relative calibration factor for compound being measured (from ICAL)
W(s) = Weight of sample in kilograms.
D = Percent dry weight (100 - % moisture in sample)/100 (Air dried =1.00)
DF = Dilution factor

Conc. µg/kg = (1205 * 80 * 1) / (89.04988 * 10 * 1.00) = 108.3 µg/kg = 0.11 mg/kg

Reported Value = 0.11 mg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

Form 1 COC

Shaw E & I Inc

Client Sample ID: 51DW05

HPLC

Lot-Sample #...: G9A120120-001 Work Order #...: K5NTD1AA Matrix.....: SO
Date Sampled...: 01/09/09 Date Received..: 01/12/09
Prep Date.....: 01/14/09 Analysis Date..: 01/16/09
Prep Batch #...: 9014299
Dilution Factor: 1
% Moisture.....: 18 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.012 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.085 J** J | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.022 J** J | **1.2** | **mg/kg** | **0.0073** |
| **Nitroglycerin** | **0.090 J** J | **0.50** | **mg/kg** | **0.015** |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| Nitrobenzene | ND | 0.25 | mg/kg | 0.018 |
| 1,3,5-Trinitrobenzene | ND | 0.25 | mg/kg | 0.010 |
| **2,4,6-Trinitrotoluene** | **0.11 J** J | **0.25** | **mg/kg** | **0.019** |
| HMX | ND | 0.25 | mg/kg | 0.012 |
| RDX | ND | 0.25 | mg/kg | 0.012 |
| Tetryl | ND | 0.25 | mg/kg | 0.010 |
| 3-Nitrotoluene | ND | 0.25 | mg/kg | 0.016 |
| 4-Amino-2,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.010 |
| PETN | ND | 0.50 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 94 | (81 - 127) |

NOTE(S):

J Estimated result. Result is less than RL.

Form 1 - Org

Shaw E & I Inc

Client Sample ID: 51DW06

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9A120120-002 | Work Order #...: | K5NTN1AL | Matrix.....: | SO |
| Date Sampled...: | 01/09/09 | Date Received..: | 01/12/09 | | |
| Prep Date.....: | 01/14/09 | Analysis Date..: | 01/16/09 | | |
| Prep Batch #...: | 9014299 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 18 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.012 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.092 J,PG** J | **0.25** | **mg/kg** | **0.0052** |
| 2,6-Dinitrotoluene | ND | 1.2 | mg/kg | 0.0072 |
| **Nitroglycerin** | **1.4** | **0.50** | **mg/kg** | **0.015** |
| **2-Nitrotoluene** | **0.25 PG** J | **0.25** | **mg/kg** | **0.013** |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| **Nitrobenzene** | **0.037 J,PG** J | **0.25** | **mg/kg** | **0.017** |
| 1,3,5-Trinitrobenzene | ND | 0.25 | mg/kg | 0.0099 |
| **2,4,6-Trinitrotoluene** | **0.038 J,PG** J | **0.25** | **mg/kg** | **0.019** |
| HMX | ND | 0.25 | mg/kg | 0.012 |
| RDX | ND | 0.25 | mg/kg | 0.012 |
| Tetryl | ND | 0.25 | mg/kg | 0.0099 |
| 3-Nitrotoluene | ND | 0.25 | mg/kg | 0.015 |
| **4-Amino-2,6-dinitrotoluene** | **0.012 J,PG** J | **0.25** | **mg/kg** | **0.0099** |
| PETN | ND | 0.50 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 93 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – TAL Metals
Test America Laboratories, Inc., SDG G9A120120

**DATE:** April 1, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on January 09, 2009. Solid samples were analyzed for target analyte list (TAL) metals using USEPA SW-846 3050B/6010B for ICP metals and SW-846 7471A for mercury. A total of two solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51DW05 | G9A120120-001 | 51DW06 | G9A120120-002 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Blank Analysis |
| | X | ICP Interference Check Sample (ICS) |
| | X | Laboratory Control Sample (LCS) |
| X | | Laboratory Sample Duplicate |
| X | | Matrix Spike and Spike Duplicate |
| | X | ICP Serial Dilution |
| | X | Field Sample Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

4/1/09
Date

**RFAAP VALIDATION REPORT**
**METALS REVIEW**
**SDG G9A120120**

## I-Holding Times and Preservation

The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: For solid matrices, the samples are shipped cool @4°C±2°C with a maximum holding time is 180 days for ICP metals and 28 days for mercury.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 01/09/09, the coolers were received by the primary laboratory (Test America) on 01/12/09 at 6.0°C, 6.0°C, and 6.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 01/09/09 for metals analysis. For solid samples, the soil samples were digested on 01/13/09 and analyzed on 01/14/09 and 01/15/09 (selenium, silver, and sodium) for ICP metals. Mercury was digested on 01/13/09 and analyzed on 01/14/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Initial and Continuing Calibration

Requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

| | | | |
|---|---|---|---|
| ICP: | 1- blank (DoD QSM <½ MRL)<br>3 – standards (r≥0.995)<br>ICV/CCV (90-110%) (DoD QSM 90-110%)<br>MRL (70-130%) (DoD QSM 80-120%)<br>High Std. (95-105%) | Hg: | 1 – blank (DoD QSM <½ MRL)<br>5 – standards (r≥0.995)<br>ICV/CCV (80-120%)(DoD QSM ICV 90-110% & CCV 80-120%)<br>MRL (80-120%) (DoD QSM 80-120%)<br>High Std. (95-105%) |

- The solid samples were analyzed for ICP metals on 01/14/09 and 01/15/09 (selenium, silver, and sodium) for ICP metals. Mercury was analyzed for the solid samples on 01/14/09 with a correlation coefficient of 0.9999. All ICV/CCV/High Standard/MRL criteria were met for all metals and runs. No qualifiers were applied.

## III-Blanks

Blanks (preparation and calibration blanks) are assessed to determine the existence and magnitude of contamination problems. No contaminants should be detected (i.e. <MDL) in any of the associated blanks. DoD QSM limits are <½MRL for the method blank and <2*MDL for the calibration blanks. Samples are qualified "B" when they are less than 5x the absolute value of the maximum blank concentration. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10 for ICP and Hg = 12) if needed.

## Table 2 Blank Contamination Analysis Summary

| Analysis Date | Analysis | QC Blank ID | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 01/14/09 | ICP Metals | ICP-Cr | 0.0106 | 0.053 | None |
| 01/14/09 | Se, Ag, Na | ICB/CCBs | <2*MDL | NA | None |
| 01/14/09 | Mercury | ICB/CCBs | <2*MDL | NA | None |
| 01/14/09 | ICP Metals | G9A130000-082 | <1/2*MRL | NA | None |
| 01/14/09 | Mercury | G9A130000-105 | <1/2*MRL | NA | None |

J = Estimated value <MRL and >MDL. Data point qualified was estimated "J".
NA = Not Applicable
MDL = Method Detection Limit.
MRL = Method Reporting Limit.

**IV-ICP Interference Check Sample (ICS)**
The ICP interference check sample (ICS) verifies interelement and background correction factors. ICP Interference Check is performed at the beginning and end of each sample analysis run. Control limits are 80-120% (DoD QSM limits 80-120%).

- All criteria were met. No qualifiers were applied.

**V-Laboratory Control Samples (LCS)**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All aqueous LCS results must fall within the control limits. The DoD QSM solid LCS recovery limits are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9A130000-082 was used as solid LCS for ICP metals analysis on 01/14-15/09. All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this LCS.

- Sample G9A130000-105 was used as solid LCS for mercury analysis on 01/14/09. All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this LCS.

**VI-Laboratory Duplicate Sample Analysis**
Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits. DoD QSM limits for metals are 20% RPD for ICP metals and mercury.

- Sample 50SB06A (F51247-1) was used as solid laboratory duplicate for ICP metals analysis on 07/30/07. Arsenic (26.2%) and chromium (32.7%) were above criteria. All other metals were within criteria. Arsenic and chromium were qualified estimated "J" based upon the high RPDs. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this laboratory duplicate.

- Sample 50SB014A (F51247-17) was used as soil laboratory duplicate for mercury analysis on 07/26/07. All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this laboratory duplicate.

**VII-Matrix Spike/Spike Duplicate**
MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Specific criteria include the analyses of matrix spike and matrix spike duplicate samples at a frequency of one MS and MSD per 20 samples of similar matrix. MS and MSD recoveries and relative percent differences between MS and MSD recoveries should be within the specified limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used. Post digestion spikes limits are 75-125% for ICP metals and mercury.

- Sample 51DW05 (G9A120120-001) was used as solid laboratory MS/MSD for ICP metals analysis on 01/14-15/09. Aluminum (2810%, 2950%), antimony (39%, 34%), iron (0.0%), and manganese (196%, 143%) were outside criteria. The associated LCS (Section V) was within criteria. The sample concentration was >4 times the spike added for aluminum and iron; therefore, no qualifiers were applied based upon these outliers. Antimony was qualified bias low "L" for detects and "UL" for non-detects based upon the low recoveries. Manganese was qualified bias high "K" for detects and no qualifier for non-detects based upon the high recoveries. All other metals were within criteria. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this MS/MSD.

- Sample 51DW05 (G9A120120-001) was used as solid MS/MSD for mercury analysis on 01/14/09. All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this MS/MSD.

**VIII-ICP Serial Dilution**
An ICP serial dilution is performed to determine whether significant physical or chemical interferences exist due to sample matrix at high concentrations. An analysis of a 5-fold dilution should agree within 10% difference of the original result when the concentration in sample is a factor of 50 above MDL.

- The serial dilution for ICP metals was analyzed on 01/14-15/09 using solid sample 51DW05 (G9A120120-001). All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this serial dilution.

- The serial dilution for mercury was analyzed on 01/14/09 using solid sample 51DW05 (G9A120120-001). All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this serial dilution.

**IX-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 35% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**X-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification.

**Sample: 51DW05 (G9A120120-001), Barium**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(459.76 µg/L)*(0.100 L)*(1)} / {(1.02 g)*(0.8240)} = 54.7 µg/g = 54.7 mg/kg

Reported concentration = 54.7 mg/kg
%D = 0.0%
Values were within 10% difference.

**Sample: 51DW05 (G9A120120-001), Mercury**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(0.721 µg/L)*(0.050 L)*(1)} / {(0.60 g)*(0.8240)} = 0.073 µg/g = 0.073 mg/kg

Reported concentration = 0.073 mg/kg
%D = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

Form I Copy

Shaw E & I Inc

Client Sample ID: 51DW05

TOTAL Metals

Lot-Sample #...: G9A120120-001
Date Sampled...: 01/09/09 Date Received..: 01/12/09
% Moisture.....: 18
Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9013082 | | | | | | |
| Silver | ND | 0.61<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 01/13-01/15/09 | K5NTD1AC |
| Aluminum | 22500 | 25.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.5 | 01/13-01/14/09 | K5NTD1AD |
| Arsenic | 3.1 J | 2.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.85 | 01/13-01/14/09 | K5NTD1AE |
| Barium | 54.7 | 2.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 01/13-01/14/09 | K5NTD1AF |
| Beryllium | 0.54 | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL .. .....: 0.12 | 01/13-01/14/09 | K5NTD1AG |
| Calcium | 198 | 121<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL. .....: 30.3 | 01/13-01/14/09 | K5NTD1AH |
| Cadmium | ND | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 01/13-01/14/09 | K5NTD1AJ |
| Cobalt | 5.6 | 0.73<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.24 | 01/13-01/14/09 | K5NTD1AK |
| Chromium | 21.7 J | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL. .....: 0.49 | 01/13-01/14/09 | K5NTD1AL |
| Copper | 10.9 | 3.0<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.61 | 01/13-01/14/09 | K5NTD1AM |
| Iron | 27200 | 12.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.8 | 01/13-01/14/09 | K5NTD1AN |
| Potassium | 845 | 121<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL. .....: 30 3 | 01/13-01/14/09 | K5NTD1AP |
| Magnesium | 900 | 60.6<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL. .....: 9.1 | 01/13-01/14/09 | K5NTD1AQ |
| Manganese | 216 K | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 01/13-01/14/09 | K5NTD1AR |

(Continued on next page)

Form I Copy

Shaw E & I Inc

Client Sample ID: 51DW05

TOTAL Metals

Lot-Sample #...: G9A120120-001 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | ND | 606 | mg/kg | SW846 6010B | 01/13-01/15/09 | K5NTD1AT |
| | | Dilution Factor: 1 | | MDL.....: 30.3 | | |
| Nickel | 8.3 | 1.2 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTD1AU |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 13.9 | 2.4 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTD1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND UL | 1.8 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTD1AW |
| | | Dilution Factor: 1 | | MDL..... ...: 0 61 | | |
| Selenium | 1.0 B J | 2.4 | mg/kg | SW846 6010B | 01/13-01/15/09 | K5NTD1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Thallium | 1.0 B J | 2.4 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTD1A0 |
| | | Dilution Factor: 1 | | MDL .....: 0.61 | | |
| Vanadium | 56.3 | 1.2 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTD1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 30.8 | 3.6 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTD1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9013105 | | | | | | |
| Mercury | 0.073 | 0.049 | mg/kg | SW846 7471A | 01/13-01/14/09 | K5NTD1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

B Estimated result Result is less than RL

Form I Copy

Shaw E & I Inc

Client Sample ID: S1DW06

TOTAL Metals

Lot-Sample #...: G9A120120-002
Date Sampled...: 01/09/09 Date Received..: 01/12/09
% Moisture.....: 18
Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9013082 | | | | | | |
| Silver | ND | 0.61 | mg/kg | SW846 6010B | 01/13-01/15/09 | K5NTN1AM |
| | | Dilution Factor: 1 | | MDL .....: 0.12 | | |
| Aluminum | 19300 | 25.7 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AN |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| Arsenic | 3.5 J | 2.6 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AP |
| | | Dilution Factor: 1 | | MDL.....: 0.86 | | |
| Barium | 52.3 | 2.4 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| Beryllium | 0.50 | 0.37 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AR |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 221 | 122 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AT |
| | | Dilution Factor: 1 | | MDL.....: 30.6 | | |
| Cadmium | ND | 0.37 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AU |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 5.6 | 0.73 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| Chromium | 19.8 J | 1.5 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AW |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| Copper | 51.8 | 3.1 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Iron | 23800 | 12.2 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1A0 |
| | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| Potassium | 743 | 122 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1A1 |
| | | Dilution Factor: 1 | | MDL.....: 30.6 | | |
| Magnesium | 836 | 61.1 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1A2 |
| | | Dilution Factor: 1 | | MDL.....: 9.2 | | |
| Manganese | 216 K | 1.5 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |

(Continued on next page)

Form I Copy

Shaw E & I Inc

Client Sample ID: 51DW06

TOTAL Metals

Lot-Sample #...: G9A120120-002 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | ND | 611 | mg/kg | SW846 6010B | 01/13-01/15/09 | K5NTN1A4 |
| | | Dilution Factor: 1 | | MDL.....: 30.6 | | |
| Nickel | 7.3 | 1.2 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1A5 |
| | | Dilution Factor: 1 | | MDL .....: 0.37 | | |
| Lead | 168 | 2.4 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1A6 |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND UL | 1.8 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1A7 |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | 0.78 B J | 2.4 | mg/kg | SW846 6010B | 01/13-01/15/09 | K5NTN1A8 |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Thallium | 0.94 B J | 2.4 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AA |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Vanadium | 48.3 | 1.2 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Zinc | 34.9 | 3.7 | mg/kg | SW846 6010B | 01/13-01/14/09 | K5NTN1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9013105 | | | | | | |
| Mercury | 0.063 | 0.049 | mg/kg | SW846 7471A | 01/13-01/14/09 | K5NTN1AE |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Pesticides and PCBs
Test America Laboratories, Inc., SDG G9A120120

**DATE:** March 31, 2009

The purpose of this memorandum is to present the data validation report for the native soil samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on January 09, 2009. Solid samples were analyzed for pesticides and PCBs using USEPA Method 3550B/8081A and 3550B/3665A/8082, respectively. A total of two solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51DW05 | G9A120120-001 | 51DW06 | G9A120120-002 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Blank Analysis |
| | X | System Monitoring Compounds |
| | X | Laboratory Control Samples |
| X | | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

3/31/09
Date

**RFAAP VALIDATION REPORT**
**PESTICIDE/PCB REVIEW**
**SDG G9A120120**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, pesticide and PCB compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 01/09/09, the coolers were received by the primary laboratory (Test America) on 01/12/09 at 6.0°C, 6.0°C, and 6.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 01/09/09. The pesticides were extracted on 01/12/09 and analyzed on 01/14/09. The PCBs were extracted on 01/12/09 and analyzed on 01/13/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Instrument Performance Check (Degradation Standard)**
Performance checks on the gas chromatograph with electron capture detector (GC/ECD) system are performed to ensure adequate resolution and instrument sensitivity. The performance evaluation mixture (PEM) must be analyzed at the beginning of the analytical sequence. The breakdown of Endrin and 4,4'-DDT must be ≤15% on both signals.

- For analysis performed on 09/06/08 @08:56, endrin and 4,4'-DDT percent breakdowns were 9.3% and 2.2% on signal #1 and 9.0% and 1.9% on signal #2, respectively. All criteria were met. No qualifiers were applied.

- For analysis performed on 01/14/09 @05:47, endrin and 4,4'-DDT percent breakdowns were 2.5% and 1.5% on signal #1 and 2.5% and 1.2% on signal #2, respectively. All criteria were met. No qualifiers were applied.

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5 point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. Calibration factors are generated for each compound. The DoD QSM specifies that the percent relative standard deviation (%RSD) for all single peak target analytes, and aroclors 1016, 1242, 1254, and 1260 must be <20% or the mean %RSD for all analytes in the standard must be ≤20%. If linear regression is used, the correlation coefficient must be ≥0.995. All detects are qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits.

- For the pesticide initial calibration performed on 09/06/08 on instrument GC73AB, all criteria were met for all target compounds. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) were analyzed using this initial calibration.

- For the PCB initial calibration performed on 01/06/09 on instrument GC66A.i, all criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) were analyzed using this initial calibration.

- For the PCB initial calibration performed on 01/14/09 on instrument GC66B.i, all criteria were met. No qualifiers were applied. Sample confirmations for 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) were analyzed using this initial calibration.

**IV-Continuing Calibration**

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for pesticide/PCB target compounds. Continuing calibration standards containing both target compounds and surrogates are analyzed at the beginning of each 12-hour analytical shift and after every 20 samples. The DoD QSM specifies that the percent difference (%D) or the average %Ds for all analytes in the standard from the initial calibration should be no greater than ±20%.

- For pesticide initial calibration verification performed on 09/06/08 @15:44 on instrument GC73AB, all criteria were met for all target compounds. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For toxaphene pesticide initial calibration verification performed on 09/06/08 @19:37 on instrument GC73AB, all criteria were met for all target compounds. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For pesticide continuing calibration performed on 01/14/09 @06:26 on instrument GC73AB, all criteria were met for signal #1 and for the signal #2 for all target compounds. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For toxaphene pesticide continuing calibration performed on 01/14/09 @07:04 on instrument GC73AB, all criteria were met for signal #1 and for the signal #2 for all target compounds. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For pesticide continuing calibration performed on 01/14/09 @09:40 on instrument GC73AB, all criteria were met for signal #1 and for the signal #2 for all target compounds. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) were analyzed using this continuing calibration.

- For toxaphene pesticide continuing calibration performed on 01/14/09 @10:19 on instrument GC73AB, all criteria were met for signal #1 and for the signal #2 for all target compounds. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) were analyzed using this continuing calibration.

- For pesticide continuing calibration performed on 01/14/09 @16:08 on instrument GC73AB, all criteria were met for signal #1 and for the signal #2 for all target compounds. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For toxaphene pesticide continuing calibration performed on 01/14/09 @16:47 on instrument GC73AB, all criteria were met for signal #1 and for the signal #2 for all target compounds. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For PCB 1016/1260 initial calibration verification performed on 01/06/09 @21:07 on instrument GC66A.i, all criteria were met for all target compounds. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For PCB 1016/1260 continuing calibration performed on 01/13/09 @15:17 on instrument GC66A.i, all criteria were met for all target compounds. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For PCB 1016/1260 continuing calibration performed on 01/13/09 @20:37 on instrument GC66A.i, all criteria were met for all target compounds. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) were analyzed using this continuing calibration.

- For PCB 1016/1260 continuing calibration performed on 01/14/09 @00:51 on instrument GC66A.i, all criteria were met for all target compounds. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For PCB 1016/1260 continuing calibration performed on 01/14/09 @23:47 on instrument GC66B.i, all criteria were met for all target compounds. No qualifiers were applied. Sample confirmations for 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) were analyzed using this continuing calibration.

- For PCB 1016/1260 continuing calibration performed on 01/15/09 @01:23 on instrument GC66B.i, all criteria were met for all target compounds. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

**V-Blank Analysis**

The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5X) the maximum amount for pesticide and PCB target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 33) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Parameter | Analysis Date | QC Blank ID | Compound | Max Conc. µg/kg | Action Level µg/kg | B qualified samples |
|---|---|---|---|---|---|---|
| Pesticides | 01/14/09 | G9A120000-284 | All target <½MRL | NA | NA | None |
| PCBs | 01/13/09 | G9A120000-288 | All target <½MRL | NA | NA | None |

NA = Not Applicable
MRL = Method Reporting Limit

**VI-System Monitoring Compound (Surrogates)**

Laboratory performance on individual samples is evaluated through the review of surrogate spike samples. Surrogate spikes are added to all samples and blanks to measure their recovery in sample and blank matrices. The percent recoveries (%Rs) must be within the specified control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

| | | |
|---|---|---|
| Solid Criteria: | Tetrachloro-m-xylene: | Pesticides: 70-125% (DoD QSM 70-125%) |
| | Decachlorobiphenyl: | Pesticides: 55-130% (DoD QSM 55-130%) |
| Solid Criteria: | Decachlorobiphenyl: | PCBs: 60-125% (DoD QSM 60-125%) |

- For pesticides sample 51DW06 (G9A120120-002), decachlorobiphenyl (0.0%) and tetrachloro-m-xylene (0.0%) surrogates were diluted out. The sample was analyzed at a 10x dilution. No qualifiers were applied based upon these outliers.

- For PCBs sample 51DW06 (G9A120120-002), decachlorobiphenyl (0.0%) surrogate was diluted out. The sample was analyzed at a 10x dilution. No qualifiers were applied based upon this outlier.

- For all other samples, all criteria were met for pesticides and PCBs analysis.

**VII-Laboratory Control Samples**
Laboratory control samples (LCS) are used to monitor laboratory accuracy by calculating the percent recoveries of the spiked compounds. All LCS percent recoveries must be within the specified control limits. DoD QSM solid LCS recovery limits are specified in Table D-15 and Table D-17 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9A120000-284 was used as the solid LCS for the pesticide analysis on 01/14/09. All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this LCS.

- Sample G9A120000-288 was used as the solid LCS for the PCB analysis on 01/13/09. All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this LCS.

**VIII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. DoD solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-15 and Table D-17 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 51DW05 (G9A120120-001) was used as the MS/MSD for the pesticide analysis on 01/14/09. All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this MS/MSD.

- Sample 51DW06 (G9A120120-002) was used as the MS/MSD for the PCB analysis on 01/13/09. PCB 1016 and PCB 1260 did not recover for the MS/MSD. The low spike recoveries were due to the spiked sample being diluted 10x for high PCB 1254 concentration and matrix effects. Sample 51DW06 (G9A120120-002) was qualified estimated "J" for detects and "UJ" for non-detects based upon uncertainty due to dilution effects and the PCB recoveries were out of control limits for the MS/MSD. The associated LCS was within criteria for PCB 1016 and PCB 1260 (See Section VII). Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this MS/MSD.

**IX-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**X-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The difference between the calculated value and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J."

- All chlorinated pesticides were non-detect. No confirmations were required.

- For PCB sample 51DW06 (G9A120120-002), PCB 1254 was outside the percent difference criteria (average %D for multi-peak compounds) between the primary and secondary columns and was qualified estimated "J" based upon this outlier.

- For all other PCB confirmations, all criteria were met.

**Sample: 51DW05MS (G9A120120-001MS), alpha-chlordane**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area/response for compound being measured.
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10000 µL.
CF = Ave calibration response factor for compound being measured from ICAL (Area/pg)
Vi = Volume of extract injected (mL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100 = 1.0 for Wet Weight
DF = Dilution factor

Conc. µg/kg = (56650994Area*10000µL*1.02) / (2236557Area/pg*(1000pg/ng)*1µL*29.32g*1.000)
= 8.64 µg/kg (Wet Weight)

Reported Value = 8.64 µg/kg (Wet Weight)
% Difference = 0.0%
Values were within 10% difference

**Sample: 51DW06 (G9A120120-002), Aroclor 1254**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area/response for compound being measured.
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10000 µL.
CF = Ave calibration response factor for compound being measured from ICAL (Area/pg)
Vi = Volume of extract injected (µL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100 = 1.0 for Wet Weight
DF = Dilution factor

Total Conc µg/kg = (3146154036*10000*10) / (21062110*(1000)*1*29.89*0.8180) = 610 µg/kg

Reported Value = 610 µg/kg
% Difference = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

Shaw E & I Inc

Client Sample ID: 51DW05

GC Semivolatiles

Lot-Sample #...: G9A120120-001 Work Order #...: K5NTD1A5 Matrix.....: SO
Date Sampled...: 01/09/09 Date Received..: 01/12/09
Prep Date.....: 01/12/09 Analysis Date..: 01/14/09
Prep Batch #...: 9012284
Dilution Factor: 0.99
% Moisture.....: 18 Method.....: SW846 8081A

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | 2.0 | ug/kg | 0.26 |
| gamma-BHC (Lindane) | ND | 2.0 | ug/kg | 0.20 |
| Heptachlor | ND | 2.0 | ug/kg | 0.23 |
| Aldrin | ND | 2.0 | ug/kg | 0.25 |
| beta-BHC | ND | 2.0 | ug/kg | 0.40 |
| delta-BHC | ND | 2.0 | ug/kg | 0.19 |
| Heptachlor epoxide | ND | 2.0 | ug/kg | 0.14 |
| Endosulfan I | ND | 2.0 | ug/kg | 0.17 |
| gamma-Chlordane | ND | 2.0 | ug/kg | 0.40 |
| alpha-Chlordane | ND | 2.0 | ug/kg | 0.24 |
| 4,4'-DDE | ND | 4.1 | ug/kg | 0.26 |
| Dieldrin | ND | 4.1 | ug/kg | 0.38 |
| Endrin | ND | 4.1 | ug/kg | 0.29 |
| 4,4'-DDD | ND | 4.1 | ug/kg | 0.31 |
| Endosulfan II | ND | 4.1 | ug/kg | 0.79 |
| 4,4'-DDT | ND | 4.1 | ug/kg | 0.48 |
| Endrin aldehyde | ND | 4.1 | ug/kg | 0.32 |
| Methoxychlor | ND | 20 | ug/kg | 1.6 |
| Endosulfan sulfate | ND | 4.1 | ug/kg | 0.26 |
| Endrin ketone | ND | 4.1 | ug/kg | 0.41 |
| Toxaphene | ND | 80 | ug/kg | 24 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 90 | (55 - 130) |
| Tetrachloro-m-xylene | 80 | (70 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

Shaw E & I Inc

Client Sample ID: 51DW06

GC Semivolatiles

Lot-Sample #...: G9A120120-002 Work Order #...: K5NTN1AG Matrix.....: SO
Date Sampled...: 01/09/09 Date Received..: 01/12/09
Prep Date.....: 01/12/09 Analysis Date..: 01/14/09
Prep Batch #...: 9012284
Dilution Factor: 10.04
% Moisture.....: 18 Method.....: SW846 8081A

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| alpha-BHC | ND G | 21 | ug/kg | 2.7 |
| gamma-BHC (Lindane) | ND | 21 | ug/kg | 2.1 |
| Heptachlor | ND | 21 | ug/kg | 2.3 |
| Aldrin | ND | 21 | ug/kg | 2.6 |
| beta-BHC | ND | 21 | ug/kg | 4.1 |
| delta-BHC | ND | 21 | ug/kg | 2.0 |
| Heptachlor epoxide | ND | 21 | ug/kg | 1.5 |
| Endosulfan I | ND | 21 | ug/kg | 1.7 |
| gamma-Chlordane | ND | 21 | ug/kg | 4.1 |
| alpha-Chlordane | ND | 21 | ug/kg | 2.5 |
| 4,4'-DDE | ND | 42 | ug/kg | 2.7 |
| Dieldrin | ND | 42 | ug/kg | 3.9 |
| Endrin | ND | 42 | ug/kg | 2.9 |
| 4,4'-DDD | ND | 42 | ug/kg | 3.2 |
| Endosulfan II | ND | 42 | ug/kg | 8.1 |
| 4,4'-DDT | ND | 42 | ug/kg | 4.9 |
| Endrin aldehyde | ND | 42 | ug/kg | 3.3 |
| Methoxychlor | ND | 210 | ug/kg | 16 |
| Endosulfan sulfate | ND | 42 | ug/kg | 2.7 |
| Endrin ketone | ND | 42 | ug/kg | 4.2 |
| Toxaphene | ND | 820 | ug/kg | 250 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 0.0 SRD,* | (55 - 130) |
| Tetrachloro-m-xylene | 0.0 SRD,* | (70 - 125) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery

* Surrogate recovery is outside stated control limits

Results and reporting limits have been adjusted for dry weight.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference

Shaw E & I Inc

Client Sample ID: 51DW05

GC Semivolatiles

Lot-Sample #...: G9A120120-001 Work Order #...: K5N[illegible]D1A6 Matrix.....: SO
Date Sampled...: 01/09/09 Date Received..: 01/[illegible]2/09
Prep Date.....: 01/12/09 Analysis Date..: 01/[illegible]3/09
Prep Batch #...: 9012288
Dilution Factor: 0.99
% Moisture.....: 18 Method.....: SW846 8082

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 40 | ug/kg | 10 |
| Aroclor 1221 | ND | 40 | ug/kg | 13 |
| Aroclor 1232 | ND | 40 | ug/kg | 10 |
| Aroclor 1242 | ND | 40 | ug/kg | 10 |
| Aroclor 1248 | ND | 40 | ug/kg | 10 |
| **Aroclor 1254** | 17 J,AA J | **40** | **ug/kg** | **10** |
| Aroclor 1260 | ND | 40 | ug/kg | 10 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 108 | (60 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

J Estimated result Result is less than RL.

AA Reported from confirmation analysis, GC66B, run at 00:11 on 1/15/2009.

Form I Copy

Shaw E & I Inc

Client Sample ID: 51DW06

GC Semivolatiles

Lot-Sample #...: G9A120120-002 Work Order #...: K5NTN1AH Matrix.....: SO
Date Sampled...: 01/09/09 Date Received..: 01/12/09
Prep Date.....: 01/12/09 Analysis Date..: 01/13/09
Prep Batch #...: 9012288
Dilution Factor: 10.04
% Moisture.....: 18 Method.....: SW846 8082

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND G UJ | 410 | ug/kg | 100 |
| Aroclor 1221 | ND UJ | 410 | ug/kg | 130 |
| Aroclor 1232 | ND UJ | 410 | ug/kg | 100 |
| Aroclor 1242 | ND UJ | 410 | ug/kg | 100 |
| Aroclor 1248 | ND UJ | 410 | ug/kg | 100 |
| **Aroclor 1254** | **610 PG J** | **410** | **ug/kg** | **100** |
| Aroclor 1260 | ND UJ | 410 | ug/kg | 100 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 0.0 SRD,* | (60 - 125) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

G Elevated reporting limit The reporting limit is elevated due to matrix interference.

PG The percent difference between the original and confirmation analyses is greater than 40%

**Shaw Environmental, Inc.**
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Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Semi-Volatiles Compounds
Test America Laboratories, Inc., SDG G9A120120

**DATE:** April 1, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on January 09, 2009. Samples were analyzed for semivolatile organic compounds (SVOCs) using USEPA SW846 Methods 3550B/8270C for solid matrices. A total of two solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51DW05 | G9A120120-001 | 51DW06 | G9A120120-002 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Blank Analysis |
| | X | Surrogate Spikes |
| | X | Internal Standards |
| | X | Laboratory Control Sample |
| X | | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

4/1/09

Date

**RFAAP VALIDATION REPORT**
**SEMIVOLATILES REVIEW**
**SDG G9A120120**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For semivolatile (SVOC) compounds in solid matrices, the samples are cooled @4°C ± 2°C with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 01/09/09, the coolers were received by the primary laboratory (Test America) on 01/12/09 at 6.0°C, 6.0°C, and 6.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 01/09/09. The TCL SVOCs were extracted on 01/14/09 and analyzed on 01/14/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Instrument Performance Check**
GC/MS instrument performance checks are performed to ensure mass resolution, identification and, to some degree, sensitivity. The analysis of the instrument performance check solution must be performed at the beginning of each 12-hour period during which samples are analyzed.

- The instrument performance check, decafluorotriphenylphosphine (DFTPP), met the ion abundance criteria. No qualification was applied.

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used is capable of producing acceptable qualitative and quantitative data for compounds on the semivolatile target compound list (TCL). Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear calibration curve. For compounds analyzed using linear regression or second order, correlation coefficients must be >0.995 and coefficients of determination >0.99. The minimum relative response factor (RRF) criteria must be ≥0.05. The DoD QSM specifies that the initial calibration percent relative standard deviation (%RSD) must be ≤15% on the average for all compounds (<30% for CCCs). All detects are qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- Initial calibration for the SVOCs was performed on 01/06/09 on instrument sv5.i. All criteria were met (%RSD≤15% or ≤30%; RRF≥0.05) for all target compounds. No qualifiers were applied. Compounds 2-nitrophenol ($r^2$=0.9998; quadratic), benzoic acid ($r^2$=0.9996; quadratic), 2-nitroaniline ($r^2$=0.9998; quadratic), 2,6-dinitrotoluene ($r^2$=0.9997; quadratic), 3-nitroaniline ($r^2$=0.9992; quadratic), 2,4-dinitrophenol ($r^2$=0.9988; quadratic), 2,4-dinitrotoluene ($r^2$=0.9996; quadratic), 4-nitroaniline ($r^2$=0.9978; quadratic), 4,6-dinitro-2-methylphenol ($r^2$=0.9971; quadratic), pentachlorophenol ($r^2$=0.9998; quadratic), and di-n-octylphthalate ($r^2$=0.9999; quadratic) were quantified using second order regression with coefficients of determination >0.99. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) were analyzed using this initial calibration.

**IV-Continuing Calibration**

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used was capable of producing acceptable qualitative and quantitative data for semivolatile target compounds. Continuing calibration standards containing both target and surrogates compounds are analyzed at the beginning of each 12-hour analysis period following the analysis of the instrument performance check and prior to the analysis of blanks and samples. The minimum relative response factors (RRF) for semivolatile target compounds and surrogates must be ≥0.05. The DoD QSM specifies that the percent difference (%D) between the initial calibration RRF and the continuing calibration RRF must be within ±20% for all target compounds. Grossly exceeding is defined where %D>40%. All detects are qualified as estimated "J" for where there were exceeding %Ds, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- For SVOC initial calibration verification performed on 01/06/09 @20:11 on instrument SV5.i, all criteria were met for all target compounds. No qualifiers were applied. No samples reported apply to this initial calibration verification.

- For SVOC continuing calibration performed on 01/14/09 @15:54 on instrument SV5.i, 4-nitrophenol (-34.4%) was outside criteria limits. For all other target compounds, all criteria were met. All samples were non-detect for 4-nitrophenol. No qualifiers were applied based upon this outlier. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this continuing calibration.

- For SVOC continuing calibration performed on 01/15/09 @10:46 on instrument SV5.i, 2,4-dinitrophenol (40.1%) and 4,6-dinitro-2-methylphenol (23.9%) were outside criteria limits. For all other target compounds, all criteria were met. All samples were non-detect for 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol. No qualifiers were applied based upon these outliers. No samples reported apply to this continuing calibration.

**V-Blank Analysis**

The purpose of blank analyses is to determine the presence and magnitude of contamination problems resulting from field and laboratory activities. A method blank analysis must be performed after the calibration standards and once every 12-hour time period beginning with the injection of DFTPP. No contaminants should be detected in any of the associated blanks > the MDL. DoD QSM criteria specifies all concentrations should be less than one-half MRL (<MRL for common laboratory contaminants phthalate esters). Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants phthalate esters, or 5 times (5X) the maximum amount for other semivolatile target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 33) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. µg/kg | Action Level µg/kg | B qualified samples |
|---|---|---|---|---|---|
| 01/14/09 | G9A120000-289 | All SVOC target <½MRL | NA | NA | None |

NA = Not applicable.
MRL = Method reporting limit.

**VI-Surrogate Spikes**
Laboratory performance on individual samples is evaluated through the review of surrogate spike samples. Surrogate spikes are added to all samples and blanks to measure their recovery in sample and blank matrices. The percent recoveries (%Rs) must be within the specified control limits. DoD surrogate recovery limits are specified in Table D-2 and Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria:
2-Chlorophenol-d4 (37-98%) – (DoD QSM = None Listed)
1,2-Dichlorobenzene-d4 (23-103%) – (DoD QSM = None Listed)
2-Fluorobiphenyl (45-105%) – (DoD QSM = 45-105%)
2-Fluorophenol (35-105%) – (DoD QSM = 35-105%)
Nitrobenzene-d5 (35-100%) – (DoD QSM = 35-100%)
Phenol – d5 (40-100%) – (DoD QSM = 40-100%)
p-Terphenyl – d14 (30-125%) – (DoD QSM = 30-125%)
2,4,6-Tribromophenol (35-125%) – (DoD QSM = 35-125%)

- All criteria were met. No qualifiers were applied.

**VII-Internal Standards**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Internal standard area counts for samples and blanks must not vary by more than a factor of two (-50% to +100%) from the associated calibration standard. The retention time of the internal standards in samples and blanks must not vary by more than ±30 seconds from the retention time of the associated calibration standard.

- All criteria were met. No qualifiers were applied.

**VIII-Laboratory Control Sample**
Laboratory control samples (LCS) are used to monitor laboratory accuracy by calculating the percent recoveries of the spiked compounds. All LCS percent recoveries must be within the specified control limits. DoD LCS solid recovery limits are specified in Table D-2 and Table D-7 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9A120000-289 was used as the solid LCS for the SVOC analysis on 01/14/09. All criteria were met. No qualifiers were applied. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this LCS.

**IX-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. DoD solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-7 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 51DW06 (G9A120120-002) was used for the solid MS/MSD for SVOC analysis on 01/14/09. 3,3'-Dichlorobenzidine (4.7%; RPD=139%) and 4-nitroaniline (RPD=35%) were outside laboratory and/or DoD QSM accuracy criteria. All other target compounds were within criteria. The associated solid LCS was within criteria for these compounds (Section VIII). 3,3'-Dichlorobenzidine was non-detect for the spiked sample and qualified "UL" based upon the low recovery. 3,3'-Dichlorobenzidine and 4-nitroaniline were non-detect for the spiked sample; therefore, no qualifiers were applied based upon the high RPDs. Samples 51DW05 (G9A120120-001) and 51DW06 (G9A120120-002) apply to this MS/MSD.

**X-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**XI-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. Percent difference (%D) between the calculated and reported values must be ≤10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J."

**Sample: 51DW05 (G9A120120-001), diethylphthalate**

Conc. µg/kg = (Ax * Is * Vt * DF) / (Ais * RRF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Is = Amount of internal standard injected (ng).
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10,000 uL.
Ais = Area of characteristic ion for the internal standard.
RRF = Average relative response factor for compound being measured (from ICAL)
Vi = Volume of extract injected (uL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100
DF = Dilution factor

Conc. µg/kg = (275453 * 40 * 1000 * 1) / (386183 * 1.23484 * 1 * 30.13 * 0.8240) = 930 µg/kg
Reported Value = 930 µg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

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Shaw E & I Inc

Client Sample ID: 51DW05

GC/MS Semivolatiles

Lot-Sample #...: G9A120120-001 Work Order #...: K5NTD1A9 Matrix.....: SO
Date Sampled...: 01/09/09 Date Received..: 01/12/09
Prep Date.....: 01/14/09 Analysis Date..: 01/14/09
Prep Batch #...: 9012289
Dilution Factor: 1
% Moisture.....: 18 Method.....: SW846 8270C

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acenaphthene | ND | 400 | ug/kg | 100 |
| Acenaphthylene | ND | 400 | ug/kg | 100 |
| Anthracene | ND | 400 | ug/kg | 100 |
| Benz(a)anthracene | ND | 400 | ug/kg | 110 |
| Benzo(b)fluoranthene | ND | 400 | ug/kg | 120 |
| Benzo(k)fluoranthene | ND | 400 | ug/kg | 140 |
| Benzoic acid | ND | 1900 | ug/kg | 350 |
| Benzo(ghi)perylene | ND | 400 | ug/kg | 130 |
| Benzo(a)pyrene | ND | 400 | ug/kg | 110 |
| Benzyl alcohol | ND | 620 | ug/kg | 210 |
| bis(2-Chloroisopropyl) ether | ND | 400 | ug/kg | 96 |
| bis(2-Ethylhexyl) phthalate | ND | 400 | ug/kg | 120 |
| 4-Bromophenyl phenyl ether | ND | 400 | ug/kg | 100 |
| Butyl benzyl phthalate | ND | 400 | ug/kg | 120 |
| Carbazole | ND | 400 | ug/kg | 120 |
| 4-Chloroaniline | ND | 400 | ug/kg | 70 |
| 4-Chloro-3-methylphenol | ND | 400 | ug/kg | 110 |
| 2-Chloronaphthalene | ND | 400 | ug/kg | 98 |
| 2-Chlorophenol | ND | 400 | ug/kg | 110 |
| 4-Chlorophenyl phenyl ether | ND | 400 | ug/kg | 110 |
| Chrysene | ND | 400 | ug/kg | 100 |
| Dibenz(a,h)anthracene | ND | 400 | ug/kg | 120 |
| Dibenzofuran | ND | 400 | ug/kg | 100 |
| Di-n-butyl phthalate | ND | 400 | ug/kg | 120 |
| 1,2-Dichlorobenzene | ND | 400 | ug/kg | 91 |
| 1,3-Dichlorobenzene | ND | 400 | ug/kg | 95 |
| 1,4-Dichlorobenzene | ND | 400 | ug/kg | 93 |
| 3,3'-Dichlorobenzidine | ND | 1900 | ug/kg | 110 |
| 2,4-Dichlorophenol | ND | 400 | ug/kg | 110 |
| **Diethyl phthalate** | **930** | **400** | **ug/kg** | **110** |
| 2,4-Dimethylphenol | ND | 610 | ug/kg | 200 |
| Dimethyl phthalate | ND | 400 | ug/kg | 110 |
| 4,6-Dinitro-2-methylphenol | ND | 2400 | ug/kg | 98 |

(Continued on next page)

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Shaw E & I Inc

Client Sample ID: 51DW05

GC/MS Semivolatiles

Lot-Sample #...: G9A120120-001 Work Order #...: K5N"D1A9 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrophenol | ND | 2400 | ug/kg | 260 |
| **2,4-Dinitrotoluene** | **150 J J** | **400** | **ug/kg** | **110** |
| 2,6-Dinitrotoluene | ND | 400 | ug/kg | 120 |
| Di-n-octyl phthalate | ND | 400 | ug/kg | 120 |
| Fluoranthene | ND | 400 | ug/kg | 120 |
| Fluorene | ND | 400 | ug/kg | 110 |
| Hexachlorobenzene | ND | 400 | ug/kg | 110 |
| Hexachlorobutadiene | ND | 400 | ug/kg | 99 |
| Hexachloroethane | ND | 400 | ug/kg | 98 |
| Indeno(1,2,3-cd)pyrene | ND | 400 | ug/kg | 120 |
| Isophorone | ND | 400 | ug/kg | 110 |
| 2-Methylnaphthalene | ND | 400 | ug/kg | 100 |
| 2-Methylphenol | ND | 400 | ug/kg | 70 |
| 3-Methylphenol & 4-Methylphenol | ND | 1200 | ug/kg | 400 |
| Naphthalene | ND | 400 | ug/kg | 99 |
| 2-Nitroaniline | ND | 1900 | ug/kg | 100 |
| 3-Nitroaniline | ND | 1900 | ug/kg | 200 |
| 4-Nitroaniline | ND | 1900 | ug/kg | 110 |
| Nitrobenzene | ND | 400 | ug/kg | 92 |
| 2-Nitrophenol | ND | 400 | ug/kg | 99 |
| 4-Nitrophenol | ND | 2400 | ug/kg | 340 |
| N-Nitrosodiphenylamine | ND | 400 | ug/kg | 100 |
| N-Nitrosodi-n-propyl-amine | ND | 400 | ug/kg | 100 |
| Pentachlorophenol | ND | 2400 | ug/kg | 62 |
| Phenanthrene | ND | 400 | ug/kg | 110 |
| Phenol | ND | 400 | ug/kg | 100 |
| Pyrene | ND | 400 | ug/kg | 110 |
| 1,2,4-Trichloro-benzene | ND | 400 | ug/kg | 100 |
| 2,4,5-Trichloro-phenol | ND | 400 | ug/kg | 100 |
| 2,4,6-Trichloro-phenol | ND | 400 | ug/kg | 100 |
| Hexachlorocyclopenta-diene | ND | 1900 | ug/kg | 75 |
| bis(2-Chloroethyl)-ether | ND | 400 | ug/kg | 98 |
| bis(2-Chloroethoxy) methane | ND | 400 | ug/kg | 110 |

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Shaw E & I Inc

Client Sample ID: 51DW05

GC/MS Semivolatiles

Lot-Sample #...: G9A120120-001 Work Order #...: K5N3D1A9 Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Chlorophenol-d4 | 66 | (37 - 98 ) |
| 1,2-Dichlorobenzene-d4 | 67 | (23 - 103) |
| 2-Fluorobiphenyl | 67 | (45 - 105) |
| 2-Fluorophenol | 66 | (35 - 105) |
| Nitrobenzene-d5 | 63 | (35 - 100) |
| Phenol-d5 | 60 | (40 - 100) |
| Terphenyl-d14 | 89 | (30 - 125) |
| 2,4,6-Tribromophenol | 78 | (35 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

J Estimated result Result is less than RL

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Shaw E & I Inc

Client Sample ID: 51DW06

GC/MS Semivolatiles

Lot-Sample #...: G9A120120-002 Work Order #...: K5NCN1A9 Matrix.....: SO
Date Sampled...: 01/09/09 Date Received..: 01/12/09
Prep Date.....: 01/14/09 Analysis Date..: 01/14/09
Prep Batch #...: 9012289
Dilution Factor: 0.97
% Moisture.....: 18 Method.....: SW846 8270C

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Nitrobenzene | ND | 390 | ug/kg | 90 |
| 2-Nitrophenol | ND | 390 | ug/kg | 97 |
| 4-Nitrophenol | ND | 2400 | ug/kg | 330 |
| N-Nitrosodiphenylamine | ND | 390 | ug/kg | 100 |
| Pentachlorophenol | ND | 2400 | ug/kg | 60 |
| Phenanthrene | ND | 390 | ug/kg | 110 |
| Phenol | ND | 390 | ug/kg | 98 |
| Pyrene | ND | 390 | ug/kg | 110 |
| 1,2,4-Trichloro-benzene | ND | 390 | ug/kg | 98 |
| 2,4,5-Trichloro-phenol | ND | 390 | ug/kg | 98 |
| 2,4,6-Trichloro-phenol | ND | 390 | ug/kg | 100 |
| Hexachlorocyclopenta-diene | ND | 1900 | ug/kg | 74 |
| Acenaphthene | ND | 390 | ug/kg | 98 |
| Acenaphthylene | ND | 390 | ug/kg | 100 |
| Anthracene | ND | 390 | ug/kg | 100 |
| Benz(a)anthracene | ND | 390 | ug/kg | 110 |
| Benzo(b)fluoranthene | ND | 390 | ug/kg | 110 |
| Benzo(k)fluoranthene | ND | 390 | ug/kg | 130 |
| Benzoic acid | ND | 1900 | ug/kg | 340 |
| Benzo(ghi)perylene | ND | 390 | ug/kg | 130 |
| Benzo(a)pyrene | ND | 390 | ug/kg | 110 |
| Benzyl alcohol | ND | 600 | ug/kg | 200 |
| bis(2-Chloroisopropyl) ether | ND | 390 | ug/kg | 94 |
| bis(2-Ethylhexyl) phthalate | ND | 390 | ug/kg | 120 |
| 4-Bromophenyl phenyl ether | ND | 390 | ug/kg | 100 |
| Butyl benzyl phthalate | ND | 390 | ug/kg | 110 |
| Carbazole | ND | 390 | ug/kg | 110 |
| 4-Chloroaniline | ND | 390 | ug/kg | 69 |
| 4-Chloro-3-methylphenol | ND | 390 | ug/kg | 110 |
| 2-Chloronaphthalene | ND | 390 | ug/kg | 96 |
| 2-Chlorophenol | ND | 390 | ug/kg | 100 |

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Shaw E & I Inc

Client Sample ID: 51DW06

GC/MS Semivolatiles

Lot-Sample #...: G9A120120-002 Work Order #...: K5NTN1A9 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| 4-Chlorophenyl phenyl ether | ND | | 390 | ug/kg | 110 |
| Chrysene | ND | | 390 | ug/kg | 100 |
| Dibenz(a,h)anthracene | ND | | 390 | ug/kg | 120 |
| Dibenzofuran | ND | | 390 | ug/kg | 100 |
| Di-n-butyl phthalate | ND | | 390 | ug/kg | 120 |
| 1,2-Dichlorobenzene | ND | | 390 | ug/kg | 89 |
| 1,3-Dichlorobenzene | ND | | 390 | ug/kg | 93 |
| 1,4-Dichlorobenzene | ND | | 390 | ug/kg | 91 |
| 3,3'-Dichlorobenzidine | ND | VL | 1900 | ug/kg | 110 |
| 2,4-Dichlorophenol | ND | | 390 | ug/kg | 110 |
| **Diethyl phthalate** | **1100** | | **390** | **ug/kg** | **110** |
| 2,4-Dimethylphenol | ND | | 590 | ug/kg | 200 |
| Dimethyl phthalate | ND | | 390 | ug/kg | 100 |
| 4,6-Dinitro-2-methylphenol | ND | | 2400 | ug/kg | 96 |
| 2,4-Dinitrophenol | ND | | 2400 | ug/kg | 250 |
| 2,4-Dinitrotoluene | ND | | 390 | ug/kg | 110 |
| 2,6-Dinitrotoluene | ND | | 390 | ug/kg | 120 |
| Di-n-octyl phthalate | ND | | 390 | ug/kg | 120 |
| Fluoranthene | ND | | 390 | ug/kg | 110 |
| Fluorene | ND | | 390 | ug/kg | 110 |
| Hexachlorobenzene | ND | | 390 | ug/kg | 110 |
| Hexachlorobutadiene | ND | | 390 | ug/kg | 97 |
| Hexachloroethane | ND | | 390 | ug/kg | 96 |
| Indeno(1,2,3-cd)pyrene | ND | | 390 | ug/kg | 110 |
| Isophorone | ND | | 390 | ug/kg | 110 |
| 2-Methylnaphthalene | ND | | 390 | ug/kg | 100 |
| 2-Methylphenol | ND | | 390 | ug/kg | 69 |
| 3-Methylphenol & 4-Methylphenol | ND | | 1200 | ug/kg | 390 |
| Naphthalene | ND | | 390 | ug/kg | 97 |
| 2-Nitroaniline | ND | | 1900 | ug/kg | 100 |
| 3-Nitroaniline | ND | | 1900 | ug/kg | 200 |
| 4-Nitroaniline | ND | | 1900 | ug/kg | 100 |
| N-Nitrosodi-n-propyl-amine | ND | | 390 | ug/kg | 100 |
| bis(2-Chloroethyl)-ether | ND | | 390 | ug/kg | 96 |
| bis(2-Chloroethoxy) methane | ND | | 390 | ug/kg | 100 |

(Continued on next page)

Form I Copy

Shaw E & I Inc

Client Sample ID: 51DW06

GC/MS Semivolatiles

Lot-Sample #...: G9A120120-002 Work Order #...: K5NTN1A9 Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Chlorophenol-d4 | 67 | (37 - 98 ) |
| 1,2-Dichlorobenzene-d4 | 67 | (23 - 103) |
| 2-Fluorobiphenyl | 71 | (45 - 105) |
| 2-Fluorophenol | 65 | (35 - 105) |
| Nitrobenzene-d5 | 67 | (35 - 100) |
| Phenol-d5 | 64 | (40 - 100) |
| Terphenyl-d14 | 84 | (30 - 125) |
| 2,4,6-Tribromophenol | 81 | (35 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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2113 Emmorton Park Road
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410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Explosives
Test America Laboratories, Inc., SDG G9B170156

**DATE:** March 27, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on February 16, 2009. Solid samples were analyzed for explosives using USEPA SW-846 8330B. A total of two solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| JWB-GF01 | G9B170156-001 | JWB-TS01 | G9B170156-002 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | System Monitoring Compounds |
| | X | Laboratory Control Sample |
| | X | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

3/27/09
Date

**RFAAP VALIDATION REPORT**
**EXPLOSIVES REVIEW**
**SDG G9B170156**

**I-Holding Times and Preservation**

The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, explosive compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 02/16/09, the coolers were received by the primary laboratory (Test America) on 02/17/09 at 4.0°C, 3.0°C, and 3.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 02/16/09. For the solid samples, the explosives were extracted on 02/19/09 and analyzed on 02/20/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**

The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. No contaminants should be present in the blanks. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5x) the maximum amount for explosive target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 02/20/09 | G9B190000-467 | All target explosives <½MRL | NA | NA | None |

MRL = Method Reporting Limit
NA = Not Applicable

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5-point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. The DoD QSM specifies that the correlation coefficient must be ≥0.995 and/or the percent relative standard deviation (%RSD) must be ≤20%. All detects were qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For the explosives initial calibration performed on 09/27/08 on instrument LC10.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this initial calibration.

- For the explosives initial calibration performed on 09/26/08 on instrument LC9.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Confirmations for samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this initial calibration.

**IV-Continuing Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. Continuing calibration standards are analyzed after every 10 injections, and at the end of the analysis sequence. The DoD QSM specifies that the percent difference (%D) from initial calibration should be no greater than ±20%. All detects were qualified as estimated "J" for where there were exceeding %Ds, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For explosives initial calibration verification performed on 09/27/08 @21:28 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No samples reported apply to this initial verification calibration.

- For explosives continuing calibration performed on 02/20/09 @17:11 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this continuing calibration.

- For explosives continuing calibration performed on 02/20/09 @23:06 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No samples reported apply to this continuing calibration.

- For explosives initial calibration verification performed on 09/27/08 @14:26 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this initial verification calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 02/20/09 @14:27 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 02/20/09 @20:41 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this continuing calibration.

- For explosives continuing calibration performed on 02/21/09 @01:53 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied.

**V-System Monitoring Compound (Surrogates)**
Laboratory performance on individual samples is established by means of spiking activities. The percent recovery (%R) for all samples and blanks must be within the laboratory control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria: 3,4-dinitrotoluene (81-127%)

- All criteria were met. No qualifiers were applied.

**VI-Laboratory Control Sample**
Laboratory control samples (LCS) are used to monitor long-term accuracy of the analytical method. The analysis is performed at a frequency of 1 per analytical batch. The percent recoveries (%Rs) must be within the laboratory control limits. DoD QSM solid LCS recovery limits are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9B190000-467 was used as solid LCS for explosives analyzed on 02/20/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the laboratory control limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample JWB-TS01 (G9B170156-002) was used as the solid MS/MSD for the explosive analysis on 02/20/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this MS/MSD.

**VIII-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**IX-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The calculation was based calibration factors. The absolute percent difference (%D) between the calculated and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns.

- All values >MDL and <MRL or <3*MDL (whichever was greater) were qualified as estimated "J".

- For all explosive confirmations, all criteria were met. No qualifiers were applied.

**Sample: JWB-GF01 (G9B170156-001), 2,4,6-trinitrotoluene**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Vt = Volume of total extract (mL).
CF = Average relative calibration factor for compound being measured (from ICAL)
W(s) = Weight of sample in kilograms.
D = Percent dry weight (100 - % moisture in sample)/100 (Air dried =1.00)
DF = Dilution factor

Conc. µg/kg = (466 * 80 * 1) / (89.04988 * 10.0 * 1.00) = 41.86 µg/kg = 0.042 mg/kg
Reported Value = 0.042 mg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

Shaw E & I Inc

Client Sample ID: JWB-GF01

HPLC

**Lot-Sample #...:** G9B170156-001 **Work Order #...:** K699E1AA **Matrix.....:** SO
**Date Sampled...:** 02/16/09 **Date Received..:** 02/17/09
**Prep Date.....:** 02/19/09 **Analysis Date..:** 02/20/09
**Prep Batch #...:** 9050467
**Dilution Factor:** 1
**% Moisture.....:** 21 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.012 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.098 J J** | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.018 J J** | **1.2** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| Nitrobenzene | ND | 0.25 | mg/kg | 0.018 |
| 1,3,5-Trinitrobenzene | ND | 0.25 | mg/kg | 0.010 |
| **2,4,6-Trinitrotoluene** | **0.042 J J** | **0.25** | **mg/kg** | **0.019** |
| HMX | ND | 0.25 | mg/kg | 0.012 |
| RDX | ND | 0.25 | mg/kg | 0.012 |
| Tetryl | ND | 0.25 | mg/kg | 0.010 |
| 3-Nitrotoluene | ND | 0.25 | mg/kg | 0.016 |
| 4-Amino-2,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.010 |
| PETN | ND | 0.50 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 99 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: JWB-TS01

HPLC

**Lot-Sample #...:** G9B170156-002 **Work Order #...:** K69901AK **Matrix.....:** SO
**Date Sampled...:** 02/16/09 **Date Received..:** 02/17/09
**Prep Date.....:** 02/19/09 **Analysis Date..:** 02/20/09
**Prep Batch #...:** 9050467
**Dilution Factor:** 0.99
**% Moisture.....:** 13 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.012 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.28** | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.060 J J** | **1.2** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| Nitrobenzene | ND | 0.25 | mg/kg | 0.017 |
| 1,3,5-Trinitrobenzene | ND | 0.25 | mg/kg | 0.0099 |
| **2,4,6-Trinitrotoluene** | **0.36** | **0.25** | **mg/kg** | **0.019** |
| HMX | ND | 0.25 | mg/kg | 0.012 |
| RDX | ND | 0.25 | mg/kg | 0.012 |
| Tetryl | ND | 0.25 | mg/kg | 0.0099 |
| 3-Nitrotoluene | ND | 0.25 | mg/kg | 0.015 |
| **4-Amino-2,6-dinitrotoluene** | **0.013 J J** | **0.25** | **mg/kg** | **0.0099** |
| PETN | ND | 0.50 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 97 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

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**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – TAL Metals
Test America Laboratories, Inc., SDG G9B170156

**DATE:** March 30, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on February 16, 2009. Solid samples were analyzed for target analyte list (TAL) metals using USEPA SW-846 3050B/6010B for ICP metals and SW-846 7471A for mercury. A total of two solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| JWB-GF01 | G9B170156-001 | JWB-TS01 | G9B170156-002 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Blank Analysis |
| | X | ICP Interference Check Sample (ICS) |
| | X | Laboratory Control Sample (LCS) |
| | X | Laboratory Sample Duplicate |
| X | | Matrix Spike and Spike Duplicate |
| X | | ICP Serial Dilution |
| | X | Field Sample Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

3/30/09
Date

**RFAAP VALIDATION REPORT**
**METALS REVIEW**
**SDG G9B170156**

## I-Holding Times and Preservation

The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: For solid matrices, the samples are shipped cool @4°C±2°C with a maximum holding time is 180 days for ICP metals and 28 days for mercury.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 02/16/09, the coolers were received by the primary laboratory (Test America) on 02/17/09 at 4.0°C, 3.0°C, and 3.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 02/16/09 for metals analysis. For solid samples, the soil samples were digested on 02/19/09 and analyzed on 02/19/09 for ICP metals. Mercury was digested on 02/24/09 and analyzed on 02/24/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Initial and Continuing Calibration

Requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

| | | | |
|---|---|---|---|
| ICP: | 1- blank (DoD QSM <½ MRL)<br>3 – standards (r≥0.995)<br>ICV/CCV (90-110%) (DoD QSM 90-110%)<br>MRL (70-130%) (DoD QSM 80-120%)<br>High Std. (95-105%) | Hg: | 1 – blank (DoD QSM <½ MRL)<br>5 – standards (r≥0.995)<br>ICV/CCV (80-120%)(DoD QSM ICV 90-110% & CCV 80-120%)<br>MRL (80-120%) (DoD QSM 80-120%)<br>High Std. (95-105%) |

- The solid samples were analyzed for ICP metals on 02/19/09. Mercury was analyzed for the solid samples on 02/24/09 with a correlation coefficient of 0.9999. All ICV/CCV/High Standard/MRL criteria were met for all metals and runs. No qualifiers were applied.

## III-Blanks

Blanks (preparation and calibration blanks) are assessed to determine the existence and magnitude of contamination problems. No contaminants should be detected (i.e. <MDL) in any of the associated blanks. DoD QSM limits are <½MRL for the method blank and <2*MDL for the calibration blanks. Samples are qualified "B" when they are less than 5x the absolute value of the maximum blank concentration. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10 for ICP and Hg = 12) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | Analysis | QC Blank ID | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 02/19/09 | ICP Metals | ICB/CCBs | <2*MDL | NA | None |
| 02/24/09 | Mercury | ICB/CCBs | <2*MDL | NA | None |
| 02/19/09 | ICP Metals | G9B190000-123 | <1/2*MRL | NA | None |
| 02/24/09 | Mercury | G9B230000-472 | <1/2*MRL | NA | None |

NA = Not Applicable
MDL = Method Detection Limit.
MRL = Method Reporting Limit.

**IV-ICP Interference Check Sample (ICS)**
The ICP interference check sample (ICS) verifies interelement and background correction factors. ICP Interference Check is performed at the beginning and end of each sample analysis run. Control limits are 80-120% (DoD QSM limits 80-120%).

- All criteria were met. No qualifiers were applied.

**V-Laboratory Control Samples (LCS)**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All aqueous LCS results must fall within the control limits. The DoD QSM solid LCS recovery limits are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9B190000-123 was used as solid LCS for ICP metals analysis on 02/19/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this LCS.

- Sample G9B230000-472 was used as solid LCS for mercury analysis on 02/24/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this LCS.

**VI-Laboratory Duplicate Sample Analysis**
Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits. DoD QSM limits for metals are 20% RPD for ICP metals and mercury.

- No laboratory duplicate was analyzed. Laboratory precision was evaluated using the Matrix Spike and Matrix Spike Duplicate (Section VII).

**VII-Matrix Spike/Spike Duplicate**
MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Specific criteria include the analyses of matrix spike and matrix spike duplicate samples at a frequency of one MS and MSD per 20 samples of similar matrix. MS and MSD recoveries and relative percent differences between MS and MSD recoveries should be within the specified limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used. Post digestion spikes limits are 75-125% for ICP metals and mercury.

- Sample JWB-GF01 (G9B170156-001) was used as solid laboratory MS/MSD for ICP metals analysis on 02/19/09. Aluminum (2100%, 0%), antimony (28%, 15%; RPD=58%), arsenic (77%, 75%), barium (76%), cadmium (77%, 74%), calcium (78%), chromium (43%, 40%), cobalt (70%), copper (73%), iron (0%, 0%), lead (76%, 67%), magnesium (140%), manganese (325%, 0%), nickel (76%), selenium (74%, 70%), silver (74%), thallium (78%, 75%), vanadium (57%, 62%), and zinc (73%) were outside criteria. All other recoveries and RPD values were within criteria. The associated LCS (Section V) was within criteria. The sample concentration was >4 times the spike added for aluminum, iron, and manganese; therefore, no qualifiers were applied based upon these outliers. Antimony was non-detect for all associated samples, therefore, no qualifiers were applied based upon the high RPD. Antimony, arsenic, barium, cadmium, calcium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc were qualified bias low "L" for detects and "UL" for non-detects based upon the low recoveries. Magnesium was qualified bias high "K" for detects and no qualifier for non-detects based upon the high recoveries. All other metals were within criteria. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this MS/MSD.

- Sample JWB-GF01 (G9B170156-001) was used as solid MS/MSD for mercury analysis on 02/24/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this MS/MSD.

**VIII-ICP Serial Dilution**

An ICP serial dilution is performed to determine whether significant physical or chemical interferences exist due to sample matrix at high concentrations. An analysis of a 5-fold dilution should agree within 10% difference of the original result when the concentration in sample is a factor of 50 above MDL.

- The serial dilution for ICP metals was analyzed on 02/19/09 using solid sample JWB-GF01 (G9B170156-001). Arsenic (16.9%), thallium (204%), beryllium (11.2%), cadmium (12.5%), cobalt (10.2%), and sodium (23.8%) were outside of criteria limits. Sample concentrations were <50 times MDL for arsenic, thallium, beryllium, cadmium, and sodium; therefore, no qualifiers were applied based upon these outliers. For cobalt, all detects were qualified estimated "J" and non-detects no qualifier based upon this outlier. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this serial dilution.

- The serial dilution for mercury was analyzed on 02/24/09 using solid sample JWB-GF01 (G9B170156-001). All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this serial dilution.

**IX-Field Duplicate Sample Analysis**

Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 35% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**X-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification.

**Sample: JWB-GF01 (G9B170156-001), Barium**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(301.82 µg/L)*(0.100 L)*(1)} / {(1.04 g)*(0.7870)} = 36.9 µg/g = 36.9 mg/kg

Reported concentration = 36.9 mg/kg
%D = 0.0%
Values were within 10% difference.

**Sample: JWB-GF01 (G9B170156-001), Mercury**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(0.979 µg/L)*(0.050 L)*(1)} / {(0.59 g)*(0.7870)} = 0.11 µg/g = 0.11 mg/kg

Reported concentration = 0.11 mg/kg
%D = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

Shaw E & I Inc

Client Sample ID: JWB-GF01

TOTAL Metals

Lot-Sample #...: G9B170156-001
Date Sampled...: 02/16/09 Date Received..: 02/17/09 Matrix.....: SO
% Moisture.....: 21

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9050123 | | | | | | |
| Silver | ND VL | 0.64 | mg/kg | SW846 6010B | 02/19/09 | K699E1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Aluminum | 33900 | 26.7 | mg/kg | SW846 6010B | 02/19/09 | K699E1AD |
| | | Dilution Factor: 1 | | MDL.....: 8.9 | | |
| Arsenic | 8.9 L | 2.7 | mg/kg | SW846 6010B | 02/19/09 | K699E1AE |
| | | Dilution Factor: 1 | | MDL.....: 0.89 | | |
| Barium | 36.9 L | 2.5 | mg/kg | SW846 6010B | 02/19/09 | K699E1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.51 | | |
| Beryllium | 1.3 | 0.38 | mg/kg | SW846 6010B | 02/19/09 | K699E1AG |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Calcium | 2000 L | 127 | mg/kg | SW846 6010B | 02/19/09 | K699E1AH |
| | | Dilution Factor: 1 | | MDL.....: 31.8 | | |
| Cadmium | 0.13 B L | 0.38 | mg/kg | SW846 6010B | 02/19/09 | K699E1AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Cobalt | 11.9 J | 0.76 | mg/kg | SW846 6010B | 02/19/09 | K699E1AK |
| | | Dilution Factor: 1 | | MDL.....: 0.25 | | |
| Chromium | 41.6 L | 1.5 | mg/kg | SW846 6010B | 02/19/09 | K699E1AL |
| | | Dilution Factor: 1 | | MDL.....: 0.51 | | |
| Copper | 20.1 L | 3.2 | mg/kg | SW846 6010B | 02/19/09 | K699E1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Iron | 37000 | 12.7 | mg/kg | SW846 6010B | 02/19/09 | K699E1AN |
| | | Dilution Factor: 1 | | MDL.....: 3.9 | | |
| Potassium | 3300 | 127 | mg/kg | SW846 6010B | 02/19/09 | K699E1AP |
| | | Dilution Factor: 1 | | MDL.....: 31.8 | | |
| Magnesium | 8580 K | 63.5 | mg/kg | SW846 6010B | 02/19/09 | K699E1AQ |
| | | Dilution Factor: 1 | | MDL.....: 9.5 | | |
| Manganese | 342 | 1.5 | mg/kg | SW846 6010B | 02/19/09 | K699E1AR |
| | | Dilution Factor: 1 | | MDL.....: 0.51 | | |

(Continued on next page)

Shaw E & I Inc

Client Sample ID: JWB-GF01

TOTAL Metals

Lot-Sample #...: G9B170156-001 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 40.0 B | J | 635 | mg/kg | SW846 6010B | 02/19/09 | K699E1AT |
| | | | Dilution Factor: 1 | | MDL.....: 31.8 | | |
| Nickel | 18.2 | L | 1.3 | mg/kg | SW846 6010B | 02/19/09 | K699E1AU |
| | | | Dilution Factor: 1 | | MDL.....: 0.38 | | |
| Lead | 15.9 | L | 2.5 | mg/kg | SW846 6010B | 02/19/09 | K699E1AV |
| | | | Dilution Factor: 1 | | MDL.....: 0.76 | | |
| Antimony | ND | UL | 1.9 | mg/kg | SW846 6010B | 02/19/09 | K699E1AW |
| | | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Selenium | ND | UL | 2.5 | mg/kg | SW846 6010B | 02/19/09 | K699E1AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.76 | | |
| Thallium | ND | UL | 2.5 | mg/kg | SW846 6010B | 02/19/09 | K699E1A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Vanadium | 72.1 | L | 1.3 | mg/kg | SW846 6010B | 02/19/09 | K699E1A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.38 | | |
| Zinc | 46.7 | L | 3.8 | mg/kg | SW846 6010B | 02/19/09 | K699E1A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.76 | | |
| Prep Batch #...: 9054472 | | | | | | | |
| Mercury | 0.11 | | 0.051 | mg/kg | SW846 7471A | 02/24/09 | K699E1A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

Shaw E & I Inc

Client Sample ID: JWB-TS01

TOTAL Metals

Lot-Sample #...: G9B170156-002 Matrix.....: SO
Date Sampled...: 02/16/09 Date Received..: 02/17/09
% Moisture.....: 13

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9050123 | | | | | | |
| Silver | ND VL | 0.57 | mg/kg | SW846 6010B | 02/19/09 | K69901AL |
| | | Dilution Factor: 1 | | MDL.....: 0.11 | | |
| Aluminum | 14500 | 24.1 | mg/kg | SW846 6010B | 02/19/09 | K69901AM |
| | | Dilution Factor: 1 | | MDL.....: 8.0 | | |
| Arsenic | 8.5 L | 2.4 | mg/kg | SW846 6010B | 02/19/09 | K69901AN |
| | | Dilution Factor: 1 | | MDL.....: 0.80 | | |
| Barium | 44.7 L | 2.3 | mg/kg | SW846 6010B | 02/19/09 | K69901AP |
| | | Dilution Factor: 1 | | MDL.....: 0.46 | | |
| Beryllium | 0.94 | 0.34 | mg/kg | SW846 6010B | 02/19/09 | K69901AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.11 | | |
| Calcium | 617 L | 115 | mg/kg | SW846 6010B | 02/19/09 | K69901AR |
| | | Dilution Factor: 1 | | MDL.....: 28.7 | | |
| Cadmium | 0.16 B L | 0.34 | mg/kg | SW846 6010B | 02/19/09 | K69901AT |
| | | Dilution Factor: 1 | | MDL.....: 0.11 | | |
| Cobalt | 15.5 J | 0.69 | mg/kg | SW846 6010B | 02/19/09 | K69901AU |
| | | Dilution Factor: 1 | | MDL.....: 0.23 | | |
| Chromium | 35.5 L | 1.4 | mg/kg | SW846 6010B | 02/19/09 | K69901AV |
| | | Dilution Factor: 1 | | MDL.....: 0.46 | | |
| Copper | 8.8 L | 2.9 | mg/kg | SW846 6010B | 02/19/09 | K69901AW |
| | | Dilution Factor: 1 | | MDL.....: 0.57 | | |
| Iron | 44100 | 11.5 | mg/kg | SW846 6010B | 02/19/09 | K69901AX |
| | | Dilution Factor: 1 | | MDL.....: 3.6 | | |
| Potassium | 1060 | 115 | mg/kg | SW846 6010B | 02/19/09 | K69901A0 |
| | | Dilution Factor: 1 | | MDL.....: 28.7 | | |
| Magnesium | 4230 K | 57.3 | mg/kg | SW846 6010B | 02/19/09 | K69901A1 |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| Manganese | 1260 | 1.4 | mg/kg | SW846 6010B | 02/19/09 | K69901A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.46 | | |

(Continued on next page)

Shaw E & I Inc

Client Sample ID: JWB-TS01

TOTAL Metals

Lot-Sample #...: G9B170156-002 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | ND | | 573 | mg/kg | SW846 6010B | 02/19/09 | K69901A3 |
| | | | Dilution Factor: 1 | | MDL.....: 28.7 | | |
| **Nickel** | **9.0** | L | **1.1** | **mg/kg** | **SW846 6010B** | **02/19/09** | **K69901A4** |
| | | | Dilution Factor: 1 | | MDL.....: 0.34 | | |
| **Lead** | **20.3** | L | **2.3** | **mg/kg** | **SW846 6010B** | **02/19/09** | **K69901A5** |
| | | | Dilution Factor: 1 | | MDL.....: 0.69 | | |
| Antimony | ND | VL | 1.7 | mg/kg | SW846 6010B | 02/19/09 | K69901A6 |
| | | | Dilution Factor: 1 | | MDL.....: 0.57 | | |
| Selenium | ND | VL | 2.3 | mg/kg | SW846 6010B | 02/19/09 | K69901A7 |
| | | | Dilution Factor: 1 | | MDL.....: 0.69 | | |
| **Thallium** | **0.61 B** | L | **2.3** | **mg/kg** | **SW846 6010B** | **02/19/09** | **K69901AA** |
| | | | Dilution Factor: 1 | | MDL.....: 0.57 | | |
| **Vanadium** | **94.6** | L | **1.1** | **mg/kg** | **SW846 6010B** | **02/19/09** | **K69901AC** |
| | | | Dilution Factor: 1 | | MDL.....: 0.34 | | |
| **Zinc** | **27.2** | L | **3.4** | **mg/kg** | **SW846 6010B** | **02/19/09** | **K69901AD** |
| | | | Dilution Factor: 1 | | MDL.....: 0.69 | | |
| Prep Batch #...: 9054472 | | | | | | | |
| **Mercury** | **0.039 B** | J | **0.046** | **mg/kg** | **SW846 7471A** | **02/24/09** | **K69901AE** |
| | | | Dilution Factor: 1 | | MDL.....: 0.0098 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

**Shaw Environmental, Inc.**
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410-612-6350
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Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Pesticides and PCBs
Test America Laboratories, Inc., SDG G9B170156

**DATE:** March 10, 2009

The purpose of this memorandum is to present the data validation report for the native soil samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on February 16, 2009. Solid samples were analyzed for pesticides and PCBs using USEPA Method 3550B/8081A and 3550B/3665A/8082, respectively. A total of two solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| JWB-GF01 | G9B170156-001 | JWB-TS01 | G9B170156-002 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Blank Analysis |
| | X | System Monitoring Compounds |
| | X | Laboratory Control Samples |
| | X | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| | X | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable.

Eric Malarek, Chemist

3/10/09
Date

**RFAAP VALIDATION REPORT**
**PESTICIDE/PCB REVIEW**
**SDG G9B170156**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, pesticide and PCB compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 02/16/09, the coolers were received by the primary laboratory (Test America) on 02/17/09 at 4.0°C, 3.0°C, and 3.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 02/16/09. The pesticides were extracted on 02/19/09 and analyzed on 02/24/09. The PCBs were extracted on 02/19/09 and analyzed on 02/24/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Instrument Performance Check (Degradation Standard)**
Performance checks on the gas chromatograph with electron capture detector (GC/ECD) system are performed to ensure adequate resolution and instrument sensitivity. The performance evaluation mixture (PEM) must be analyzed at the beginning of the analytical sequence. The breakdown of Endrin and 4,4'-DDT must be ≤15% on both signals.

- For analysis performed on 02/03/09 @10:29, endrin and 4,4'-DDT percent breakdowns were 4.5% and 0.9% on signal #1 and 4.6% and 0.6% on signal #2, respectively. All criteria were met. No qualifiers were applied.

- For analysis performed on 02/03/09 @23:08, endrin and 4,4'-DDT percent breakdowns were 5.0% and 1.0% on signal #1 and 5.4% and 0.7% on signal #2, respectively. All criteria were met. No qualifiers were applied.

- For analysis performed on 02/24/09 @11:01, endrin and 4,4'-DDT percent breakdowns were 10.5% and 1.6% on signal #1 and 10.2% and 1.4% on signal #2, respectively. All criteria were met. No qualifiers were applied.

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5 point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. Calibration factors are generated for each compound. The DoD QSM specifies that the percent relative standard deviation (%RSD) for all single peak target analytes, and aroclors 1016, 1242, 1254, and 1260 must be <20% or the mean %RSD for all analytes in the standard must be ≤20%. If linear regression is used, the correlation coefficient must be ≥0.995. All detects are qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits.

- For the pesticide initial calibration performed on 02/03-04/09 on instrument GC67AB.i, all criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) were analyzed using this initial calibration.

- For the PCB initial calibration performed on 01/19/09 on instrument GC66A.i, all criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) were analyzed using this initial calibration.

**IV-Continuing Calibration**

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for pesticide/PCB target compounds. Continuing calibration standards containing both target compounds and surrogates are analyzed at the beginning of each 12-hour analytical shift and after every 20 samples. The DoD QSM specifies that the percent difference (%D) or the average %Ds for all analytes in the standard from the initial calibration should be no greater than ±20%.

- For pesticide initial calibration verification performed on 02/03/09 @17:09 on instrument GC67AB.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For toxaphene pesticide initial calibration verification performed on 02/04/09 @04:28 on instrument GC67AB.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For pesticide continuing calibration performed on 02/24/09 @11:41 on instrument GC67AB.i, all criteria were met for signal #1 and for the signal #2. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) were analyzed using this continuing calibration.

- For toxaphene pesticide continuing calibration performed on 02/24/09 @12:21 on instrument GC67AB.i, all criteria were met for signal #1 and for the signal #2. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) were analyzed using this continuing calibration.

- For pesticide continuing calibration performed on 02/24/09 @19:01 on instrument GC67AB.i, all criteria were met for signal #1 and for the signal #2. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For toxaphene pesticide continuing calibration performed on 02/24/09 @19:41 on instrument GC67AB.i, all criteria were met for signal #1 and for the signal #2. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For PCB 1016/1260 initial calibration verification performed on 01/19/09 @20:18 on instrument GC66A.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For PCB 1016/1260 continuing calibration performed on 02/24/09 @11:46 on instrument GC66A.i, all criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) were analyzed using this continuing calibration.

- For PCB 1016/1260 continuing calibration performed on 02/24/09 @15:28 on instrument GC66A.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

**V-Blank Analysis**

The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5X) the maximum amount for pesticide and PCB target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 33) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Parameter | Analysis Date | QC Blank ID | Compound | Max Conc. µg/kg | Action Level µg/kg | B qualified samples |
|---|---|---|---|---|---|---|
| Pesticides | 02/24/09 | G9B190000-375 | All target <½MRL | NA | NA | None |
| PCBs | 02/24/09 | G9B190000-380 | All target <½MRL | NA | NA | None |

NA = Not Applicable
MRL = Method Reporting Limit

**VI-System Monitoring Compound (Surrogates)**

Laboratory performance on individual samples is evaluated through the review of surrogate spike samples. Surrogate spikes are added to all samples and blanks to measure their recovery in sample and blank matrices. The percent recoveries (%Rs) must be within the specified control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

| | | |
|---|---|---|
| Solid Criteria: | Tetrachloro-m-xylene: | Pesticides: 70-125% (DoD QSM 70-125%) |
| | Decachlorobiphenyl: | Pesticides: 55-130% (DoD QSM 55-130%) |
| Solid Criteria: | Decachlorobiphenyl: | PCBs: 60-125% (DoD QSM 60-125%) |

- All criteria were met. No qualifiers were applied.

**VII-Laboratory Control Samples**

Laboratory control samples (LCS) are used to monitor laboratory accuracy by calculating the percent recoveries of the spiked compounds. All LCS percent recoveries must be within the specified control limits. DoD QSM solid LCS recovery limits are specified in Table D-15 and Table D-17 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9B190000-375 was used as the solid LCS for the pesticide analysis on 02/24/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this LCS.

- Sample G9B190000-380 was used as the solid LCS for the PCB analysis on 02/24/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this LCS.

**VIII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. DoD solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-15 and Table D-17 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample JWB-GF01 (G9B170156-001) was used as the MS/MSD for the pesticide analysis on 02/24/09. Heptachlor (178%; RPD=50%) was outside laboratory and/or DoD QSM accuracy criteria. All other target compounds were within criteria. The associated solid LCS was within criteria for this compound (Section VII). Heptachlor was non-detect for the spiked sample; therefore, no qualifiers were applied based upon the high recovery and RPD. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this MS/MSD.

- Sample JWB-TS01 (G9B170156-002) was used as the MS/MSD for the PCB analysis on 02/24/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this MS/MSD.

**IX-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**X-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The difference between the calculated value and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J."

- All chlorinated pesticides and PCBs were non-detect. No confirmations were required.

**Sample: JWB-GF01MS (G9B170156-001MS), alpha-chlordane**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area/response for compound being measured.
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10000 µL.
CF = Ave calibration response factor for compound being measured from ICAL (Area/pg)
Vi = Volume of extract injected (mL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100 = 1.0 for Wet Weight
DF = Dilution factor

Conc. µg/kg = (62663900Area*10000µL*1) / (3076016Area/pg*(1000pg/ng)*1µL*30.73g*0.790)
= 8.39 µg/kg (Signal #1)

Conc. µg/kg = (45382633Area*10000µL*1) / (2277026Area/pg*(1000pg/ng)*1µL*30.73g*0.790)
= 8.21 µg/kg (Signal #2)

Reported Value = 8.42 µg/kg (Signal #1)
% Difference = 0.4%
Values were within 10% difference

**Sample: JWB-TS01MS (G9B170156-002MS), Aroclor 1260**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area/response for compound being measured.
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10000 µL.
CF = Ave calibration response factor for compound being measured from ICAL (Area/pg)
Vi = Volume of extract injected (µL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100 = 1.0 for Wet Weight
DF = Dilution factor

Conc (Totals) µg/kg = (4418820684Area*10000µL*1) / (23391978Area/pg*(1000)*1µL*29.61g*0.870)
= 73.3 µg/kg (Signal #1)

Reported Value = 73.2 µg/kg (signal #1)
% Difference = 0.1%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

Shaw E & I Inc

Client Sample ID: JWB-GF01

GC Semivolatiles

**Lot-Sample #...:** G9B170156-001 **Work Order #...:** K699E1A5 **Matrix.....:** SO
**Date Sampled...:** 02/16/09 **Date Received..:** 02/17/09
**Prep Date.....:** 02/19/09 **Analysis Date..:** 02/24/09
**Prep Batch #...:** 9050375
**Dilution Factor:** 1
**% Moisture.....:** 21 **Method.....:** SW846 8081A

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | 2.2 | ug/kg | 0.28 |
| gamma-BHC (Lindane) | ND | 2.2 | ug/kg | 0.22 |
| Heptachlor | ND | 2.2 | ug/kg | 0.24 |
| Aldrin | ND | 2.2 | ug/kg | 0.27 |
| beta-BHC | ND | 2.2 | ug/kg | 0.42 |
| delta-BHC | ND | 2.2 | ug/kg | 0.20 |
| Heptachlor epoxide | ND | 2.2 | ug/kg | 0.15 |
| Endosulfan I | ND | 2.2 | ug/kg | 0.18 |
| gamma-Chlordane | ND | 2.2 | ug/kg | 0.42 |
| alpha-Chlordane | ND | 2.2 | ug/kg | 0.25 |
| 4,4'-DDE | ND | 4.3 | ug/kg | 0.28 |
| Dieldrin | ND | 4.3 | ug/kg | 0.41 |
| Endrin | ND | 4.3 | ug/kg | 0.30 |
| 4,4'-DDD | ND | 4.3 | ug/kg | 0.33 |
| Endosulfan II | ND | 4.3 | ug/kg | 0.84 |
| 4,4'-DDT | ND | 4.3 | ug/kg | 0.51 |
| Endrin aldehyde | ND | 4.3 | ug/kg | 0.34 |
| Methoxychlor | ND | 22 | ug/kg | 1.7 |
| Endosulfan sulfate | ND | 4.3 | ug/kg | 0.28 |
| Endrin ketone | ND | 4.3 | ug/kg | 0.43 |
| Toxaphene | ND | 85 | ug/kg | 25 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 95 | (55 - 130) |
| Tetrachloro-m-xylene | 75 | (70 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

Shaw E & I Inc

Client Sample ID: JWB-TS01

GC Semivolatiles

Lot-Sample #...: G9B170156-002
Date Sampled...: 02/16/09
Prep Date.....: 02/19/09
Prep Batch #...: 9050375
Dilution Factor: 1.01
% Moisture.....: 13

Work Order #...: K69901AG
Date Received..: 02/17/09
Analysis Date..: 02/24/09

Matrix.....: SO

Method.....: SW846 8081A

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | 2.0 | ug/kg | 0.25 |
| gamma-BHC (Lindane) | ND | 2.0 | ug/kg | 0.20 |
| Heptachlor | ND | 2.0 | ug/kg | 0.22 |
| Aldrin | ND | 2.0 | ug/kg | 0.24 |
| beta-BHC | ND | 2.0 | ug/kg | 0.38 |
| delta-BHC | ND | 2.0 | ug/kg | 0.19 |
| Heptachlor epoxide | ND | 2.0 | ug/kg | 0.14 |
| Endosulfan I | ND | 2.0 | ug/kg | 0.16 |
| gamma-Chlordane | ND | 2.0 | ug/kg | 0.38 |
| alpha-Chlordane | ND | 2.0 | ug/kg | 0.23 |
| 4,4'-DDE | ND | 3.9 | ug/kg | 0.25 |
| Dieldrin | ND | 3.9 | ug/kg | 0.37 |
| Endrin | ND | 3.9 | ug/kg | 0.28 |
| 4,4'-DDD | ND | 3.9 | ug/kg | 0.30 |
| Endosulfan II | ND | 3.9 | ug/kg | 0.76 |
| 4,4'-DDT | ND | 3.9 | ug/kg | 0.46 |
| Endrin aldehyde | ND | 3.9 | ug/kg | 0.31 |
| Methoxychlor | ND | 20 | ug/kg | 1.5 |
| Endosulfan sulfate | ND | 3.9 | ug/kg | 0.25 |
| Endrin ketone | ND | 3.9 | ug/kg | 0.39 |
| Toxaphene | ND | 78 | ug/kg | 23 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 95 | (55 - 130) |
| Tetrachloro-m-xylene | 79 | (70 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Shaw E & I Inc

Client Sample ID: JWB-GF01

GC Semivolatiles

Lot-Sample #...: G9B170156-001 Work Order #...: K699E1A6 Matrix.....: SO
Date Sampled...: 02/16/09 Date Received..: 02/17/09
Prep Date.....: 02/19/09 Analysis Date..: 02/24/09
Prep Batch #...: 9050380
Dilution Factor: 1
% Moisture.....: 21 Method.....: SW846 8082

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 42 | ug/kg | 11 |
| Aroclor 1221 | ND | 42 | ug/kg | 13 |
| Aroclor 1232 | ND | 42 | ug/kg | 11 |
| Aroclor 1242 | ND | 42 | ug/kg | 11 |
| Aroclor 1248 | ND | 42 | ug/kg | 11 |
| Aroclor 1254 | ND | 42 | ug/kg | 11 |
| Aroclor 1260 | ND | 42 | ug/kg | 11 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 81 | (60 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: JWB-TS01

GC Semivolatiles

Lot-Sample #...: G9B170156-002 Work Order #...: K69901AH Matrix.....: SO
Date Sampled...: 02/16/09 Date Received..: 02/17/09
Prep Date.....: 02/19/09 Analysis Date..: 02/24/09
Prep Batch #...: 9050380
Dilution Factor: 1.01
% Moisture.....: 13 Method.....: SW846 8082

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 38 | ug/kg | 9.6 |
| Aroclor 1221 | ND | 38 | ug/kg | 12 |
| Aroclor 1232 | ND | 38 | ug/kg | 9.6 |
| Aroclor 1242 | ND | 38 | ug/kg | 9.6 |
| Aroclor 1248 | ND | 38 | ug/kg | 9.6 |
| Aroclor 1254 | ND | 38 | ug/kg | 9.6 |
| Aroclor 1260 | ND | 38 | ug/kg | 9.6 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 88 | (60 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Semi-Volatiles Compounds
Test America Laboratories, Inc., SDG G9B170156

**DATE:** March 27, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on February 16, 2009. Samples were analyzed for semivolatile organic compounds (SVOCs) using USEPA SW846 Methods 3550B/8270C for solid matrices. A total of two solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| JWB-GF01 | G9B170156-001 | JWB-TS01 | G9B170156-002 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Blank Analysis |
| | X | Surrogate Spikes |
| | X | Internal Standards |
| | X | Laboratory Control Sample |
| | X | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

3/27/09
Date

**RFAAP VALIDATION REPORT**
**SEMIVOLATILES REVIEW**
**SDG G9B170156**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For semivolatile (SVOC) compounds in solid matrices, the samples are cooled @4°C ± 2°C with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 02/16/09, the coolers were received by the primary laboratory (Test America) on 02/17/09 at 4.0°C, 3.0°C, and 3.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 02/16/09. The TCL SVOCs were extracted on 02/19/09 and analyzed on 02/20/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Instrument Performance Check**
GC/MS instrument performance checks are performed to ensure mass resolution, identification and, to some degree, sensitivity. The analysis of the instrument performance check solution must be performed at the beginning of each 12-hour period during which samples are analyzed.

- The instrument performance check, decafluorotriphenylphosphine (DFTPP), met the ion abundance criteria. No qualification was applied.

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used is capable of producing acceptable qualitative and quantitative data for compounds on the semivolatile target compound list (TCL). Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear calibration curve. For compounds analyzed using linear regression or second order, correlation coefficients must be >0.995 and coefficients of determination >0.99. The minimum relative response factor (RRF) criteria must be ≥0.05. The DoD QSM specifies that the initial calibration percent relative standard deviation (%RSD) must be ≤15% on the average for all compounds (<30% for CCCs). All detects are qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- Initial calibration for the SVOCs was performed on 02/02/09 on instrument sv5.i. All criteria were met (%RSD≤15% or ≤30%; RRF≥0.05) for all target compounds. No qualifiers were applied. Compounds benzoic acid ($r^2$=0.9993; quadratic), 2,4-dinitrophenol ($r^2$=0.9952; quadratic), 4-nitrophenol ($r^2$=0.9979; quadratic), 4,6-dinitro-2-methylphenol ($r^2$=0.9991; quadratic), pentachlorophenol ($r^2$=0.9991; quadratic), di-n-octylphthalate ($r^2$=0.9992; quadratic), and indeno(1,2,3-cd)pyrene ($r^2$=0.9968; quadratic) were quantified using second order regression with coefficients of determination >0.99. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) were analyzed using this initial calibration.

## IV-Continuing Calibration

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used was capable of producing acceptable qualitative and quantitative data for semivolatile target compounds. Continuing calibration standards containing both target and surrogates compounds are analyzed at the beginning of each 12-hour analysis period following the analysis of the instrument performance check and prior to the analysis of blanks and samples. The minimum relative response factors (RRF) for semivolatile target compounds and surrogates must be ≥0.05. The DoD QSM specifies that the percent difference (%D) between the initial calibration RRF and the continuing calibration RRF must be within ±20% for all target compounds. Grossly exceeding is defined where %D>40%. All detects are qualified as estimated "J" for where there were exceeding %Ds, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- For SVOC initial calibration verification performed on 02/02/09 @21:32 on instrument sv5.i, all criteria were met for all target compounds. No qualifiers were applied. No samples reported apply to this initial calibration verification.

- For SVOC continuing calibration performed on 02/20/09 @09:38 on instrument sv5.i, all criteria were met for all target compounds. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this continuing calibration.

## V-Blank Analysis

The purpose of blank analyses is to determine the presence and magnitude of contamination problems resulting from field and laboratory activities. A method blank analysis must be performed after the calibration standards and once every 12-hour time period beginning with the injection of DFTPP. No contaminants should be detected in any of the associated blanks > the MDL. DoD QSM criteria specifies all concentrations should be less than one-half MRL (<MRL for common laboratory contaminants phthalate esters). Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants phthalate esters, or 5 times (5X) the maximum amount for other semivolatile target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 33) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. µg/kg | Action Level µg/kg | B qualified samples |
|---|---|---|---|---|---|
| 02/20/09 | G9B190000-399 | All SVOC target <½MRL | NA | NA | None |

NA = Not applicable.
MRL = Method reporting limit.

**VI-Surrogate Spikes**
Laboratory performance on individual samples is evaluated through the review of surrogate spike samples. Surrogate spikes are added to all samples and blanks to measure their recovery in sample and blank matrices. The percent recoveries (%Rs) must be within the specified control limits. DoD surrogate recovery limits are specified in Table D-2 and Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria:
2-Chlorophenol-d4 (37-98%) – (DoD QSM = None Listed)
1,2-Dichlorobenzene-d4 (23-103%) – (DoD QSM = None Listed)
2-Fluorobiphenyl (45-105%) – (DoD QSM = 45-105%)
2-Fluorophenol (35-105%) – (DoD QSM = 35-105%)
Nitrobenzene-d5 (35-100%) – (DoD QSM = 35-100%)
Phenol – d5 (40-100%) – (DoD QSM = 40-100%)
p-Terphenyl – d14 (30-125%) – (DoD QSM = 30-125%)
2,4,6-Tribromophenol (35-125%) – (DoD QSM = 35-125%)

- All criteria were met. No qualifiers were applied.

**VII-Internal Standards**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Internal standard area counts for samples and blanks must not vary by more than a factor of two (-50% to +100%) from the associated calibration standard. The retention time of the internal standards in samples and blanks must not vary by more than ±30 seconds from the retention time of the associated calibration standard.

- All criteria were met. No qualifiers were applied.

**VIII-Laboratory Control Sample**
Laboratory control samples (LCS) are used to monitor laboratory accuracy by calculating the percent recoveries of the spiked compounds. All LCS percent recoveries must be within the specified control limits. DoD LCS solid recovery limits are specified in Table D-2 and Table D-7 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9B190000-399 was used as the solid LCS for the SVOC analysis on 02/20/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this LCS.

**IX-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. DoD solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-7 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample JWB-GF01 (G9B170156-001) was used for the solid MS/MSD for SVOC analysis on 02/20/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001) and JWB-TS01 (G9B170156-002) apply to this MS/MSD.

**X-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**XI-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. Percent difference (%D) between the calculated and reported values must be ≤10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J."

**Sample: JWB-TS01 (G9B170156-002), 2,4-dinitrotoluene**

Conc. µg/kg = (Ax * Is * Vt * DF) / (Ais * RRF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Is = Amount of internal standard injected (ng).
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10,000 uL.
Ais = Area of characteristic ion for the internal standard.
RRF = Average relative response factor for compound being measured (from ICAL)
Vi = Volume of extract injected (uL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100
DF = Dilution factor

Conc. µg/kg = (19408 * 40 * 1000 * 1) / (828456 * 0.33403 * 1 * 29.73* 0.8700) = 110 µg/kg
Reported Value = 110 µg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

Shaw E & I Inc

Client Sample ID: JWB-GF01

GC/MS Semivolatiles

**Lot-Sample #...:** G9B170156-001 **Work Order #...:** K699E1A7 **Matrix.....:** SO
**Date Sampled...:** 02/16/09 **Date Received..:** 02/17/09
**Prep Date.....:** 02/19/09 **Analysis Date..:** 02/20/09
**Prep Batch #...:** 9050399
**Dilution Factor:** 1.01
**% Moisture.....:** 21 **Method.....:** SW846 8270C

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acenaphthene | ND | 420 | ug/kg | 110 |
| Acenaphthylene | ND | 420 | ug/kg | 110 |
| Anthracene | ND | 420 | ug/kg | 110 |
| Benz(a)anthracene | ND | 420 | ug/kg | 120 |
| Benzo(b)fluoranthene | ND | 420 | ug/kg | 120 |
| Benzo(k)fluoranthene | ND | 420 | ug/kg | 140 |
| Benzoic acid | ND | 2100 | ug/kg | 370 |
| Benzo(ghi)perylene | ND | 420 | ug/kg | 140 |
| Benzo(a)pyrene | ND | 420 | ug/kg | 120 |
| Benzyl alcohol | ND | 650 | ug/kg | 220 |
| bis(2-Chloroisopropyl) ether | ND | 420 | ug/kg | 100 |
| bis(2-Ethylhexyl) phthalate | ND | 420 | ug/kg | 130 |
| 4-Bromophenyl phenyl ether | ND | 420 | ug/kg | 110 |
| Butyl benzyl phthalate | ND | 420 | ug/kg | 120 |
| Carbazole | ND | 420 | ug/kg | 120 |
| 4-Chloroaniline | ND | 420 | ug/kg | 74 |
| 4-Chloro-3-methylphenol | ND | 420 | ug/kg | 120 |
| 2-Chloronaphthalene | ND | 420 | ug/kg | 100 |
| 2-Chlorophenol | ND | 420 | ug/kg | 110 |
| 4-Chlorophenyl phenyl ether | ND | 420 | ug/kg | 120 |
| Chrysene | ND | 420 | ug/kg | 110 |
| Dibenz(a,h)anthracene | ND | 420 | ug/kg | 130 |
| Dibenzofuran | ND | 420 | ug/kg | 110 |
| Di-n-butyl phthalate | ND | 420 | ug/kg | 120 |
| 1,2-Dichlorobenzene | ND | 420 | ug/kg | 96 |
| 1,3-Dichlorobenzene | ND | 420 | ug/kg | 100 |
| 1,4-Dichlorobenzene | ND | 420 | ug/kg | 99 |
| 3,3'-Dichlorobenzidine | ND | 2100 | ug/kg | 120 |
| 2,4-Dichlorophenol | ND | 420 | ug/kg | 110 |
| Diethyl phthalate | ND | 420 | ug/kg | 120 |
| 2,4-Dimethylphenol | ND | 640 | ug/kg | 210 |
| Dimethyl phthalate | ND | 420 | ug/kg | 110 |
| 4,6-Dinitro-2-methylphenol | ND | 2600 | ug/kg | 100 |

(Continued on next page)

Shaw E & I Inc

Client Sample ID: JWB-GF01

GC/MS Semivolatiles

Lot-Sample #...: G9B170156-001 Work Order #...: K699E1A7 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrophenol | ND | 2600 | ug/kg | 270 |
| 2,4-Dinitrotoluene | ND | 420 | ug/kg | 110 |
| 2,6-Dinitrotoluene | ND | 420 | ug/kg | 130 |
| Di-n-octyl phthalate | ND | 420 | ug/kg | 120 |
| Fluoranthene | ND | 420 | ug/kg | 120 |
| Fluorene | ND | 420 | ug/kg | 120 |
| Hexachlorobenzene | ND | 420 | ug/kg | 110 |
| Hexachlorobutadiene | ND | 420 | ug/kg | 110 |
| Hexachloroethane | ND | 420 | ug/kg | 100 |
| Indeno(1,2,3-cd)pyrene | ND | 420 | ug/kg | 120 |
| Isophorone | ND | 420 | ug/kg | 120 |
| 2-Methylnaphthalene | ND | 420 | ug/kg | 110 |
| 2-Methylphenol | ND | 420 | ug/kg | 74 |
| 3-Methylphenol & 4-Methylphenol | ND | 1300 | ug/kg | 420 |
| Naphthalene | ND | 420 | ug/kg | 110 |
| 2-Nitroaniline | ND | 2100 | ug/kg | 110 |
| 3-Nitroaniline | ND | 2100 | ug/kg | 210 |
| 4-Nitroaniline | ND | 2100 | ug/kg | 110 |
| Nitrobenzene | ND | 420 | ug/kg | 97 |
| 2-Nitrophenol | ND | 420 | ug/kg | 110 |
| 4-Nitrophenol | ND | 2600 | ug/kg | 360 |
| N-Nitrosodiphenylamine | ND | 420 | ug/kg | 110 |
| N-Nitrosodi-n-propyl-amine | ND | 420 | ug/kg | 110 |
| Pentachlorophenol | ND | 2600 | ug/kg | 65 |
| Phenanthrene | ND | 420 | ug/kg | 120 |
| Phenol | ND | 420 | ug/kg | 110 |
| Pyrene | ND | 420 | ug/kg | 120 |
| 1,2,4-Trichloro-benzene | ND | 420 | ug/kg | 110 |
| 2,4,5-Trichloro-phenol | ND | 420 | ug/kg | 110 |
| 2,4,6-Trichloro-phenol | ND | 420 | ug/kg | 110 |
| Hexachlorocyclopenta-diene | ND | 2100 | ug/kg | 80 |
| bis(2-Chloroethyl)-ether | ND | 420 | ug/kg | 100 |
| bis(2-Chloroethoxy) methane | ND | 420 | ug/kg | 110 |

(Continued on next page)

Shaw E & I Inc

Client Sample ID: JWB-GF01

GC/MS Semivolatiles

Lot-Sample #...: G9B170156-001 Work Order #...: K699E1A7 Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Chlorophenol-d4 | 66 | (37 - 98 ) |
| 1,2-Dichlorobenzene-d4 | 67 | (23 - 103) |
| 2-Fluorobiphenyl | 69 | (45 - 105) |
| 2-Fluorophenol | 71 | (35 - 105) |
| Nitrobenzene-d5 | 66 | (35 - 100) |
| Phenol-d5 | 69 | (40 - 100) |
| Terphenyl-d14 | 76 | (30 - 125) |
| 2,4,6-Tribromophenol | 75 | (35 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Shaw E & I Inc

Client Sample ID: JWB-TS01

GC/MS Semivolatiles

Lot-Sample #...: G9B170156-002 Work Order #...: K69901AJ Matrix.....: SO
Date Sampled...: 02/16/09 Date Received..: 02/17/09
Prep Date.....: 02/19/09 Analysis Date..: 02/20/09
Prep Batch #...: 9050399
Dilution Factor: 1.01
% Moisture.....: 13 Method.....: SW846 8270C

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acenaphthene | ND | 380 | ug/kg | 96 |
| Acenaphthylene | ND | 380 | ug/kg | 98 |
| Anthracene | ND | 380 | ug/kg | 100 |
| Benz(a)anthracene | ND | 380 | ug/kg | 110 |
| Benzo(b)fluoranthene | ND | 380 | ug/kg | 110 |
| Benzo(k)fluoranthene | ND | 380 | ug/kg | 130 |
| Benzoic acid | ND | 1900 | ug/kg | 330 |
| Benzo(ghi)perylene | ND | 380 | ug/kg | 130 |
| Benzo(a)pyrene | ND | 380 | ug/kg | 110 |
| Benzyl alcohol | ND | 590 | ug/kg | 200 |
| bis(2-Chloroisopropyl) ether | ND | 380 | ug/kg | 91 |
| bis(2-Ethylhexyl) phthalate | ND | 380 | ug/kg | 110 |
| 4-Bromophenyl phenyl ether | ND | 380 | ug/kg | 98 |
| Butyl benzyl phthalate | ND | 380 | ug/kg | 110 |
| Carbazole | ND | 380 | ug/kg | 110 |
| 4-Chloroaniline | ND | 380 | ug/kg | 67 |
| 4-Chloro-3-methylphenol | ND | 380 | ug/kg | 110 |
| 2-Chloronaphthalene | ND | 380 | ug/kg | 94 |
| 2-Chlorophenol | ND | 380 | ug/kg | 100 |
| 4-Chlorophenyl phenyl ether | ND | 380 | ug/kg | 110 |
| Chrysene | ND | 380 | ug/kg | 97 |
| Dibenz(a,h)anthracene | ND | 380 | ug/kg | 120 |
| Dibenzofuran | ND | 380 | ug/kg | 100 |
| Di-n-butyl phthalate | ND | 380 | ug/kg | 110 |
| 1,2-Dichlorobenzene | ND | 380 | ug/kg | 87 |
| 1,3-Dichlorobenzene | ND | 380 | ug/kg | 90 |
| 1,4-Dichlorobenzene | ND | 380 | ug/kg | 89 |
| 3,3'-Dichlorobenzidine | ND | 1900 | ug/kg | 110 |
| 2,4-Dichlorophenol | ND | 380 | ug/kg | 100 |
| Diethyl phthalate | ND | 380 | ug/kg | 100 |
| 2,4-Dimethylphenol | ND | 580 | ug/kg | 190 |
| Dimethyl phthalate | ND | 380 | ug/kg | 100 |
| 4,6-Dinitro-2-methylphenol | ND | 2300 | ug/kg | 94 |

(Continued on next page)

Shaw E & I Inc

Client Sample ID: JWB-TS01

GC/MS Semivolatiles

Lot-Sample #...: G9B170156-002 Work Order #...: K69901AJ Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrophenol | ND | 2300 | ug/kg | 250 |
| **2,4-Dinitrotoluene** | **110 J** J | **380** | **ug/kg** | **100** |
| 2,6-Dinitrotoluene | ND | 380 | ug/kg | 110 |
| Di-n-octyl phthalate | ND | 380 | ug/kg | 110 |
| Fluoranthene | ND | 380 | ug/kg | 110 |
| Fluorene | ND | 380 | ug/kg | 110 |
| Hexachlorobenzene | ND | 380 | ug/kg | 100 |
| Hexachlorobutadiene | ND | 380 | ug/kg | 95 |
| Hexachloroethane | ND | 380 | ug/kg | 94 |
| Indeno(1,2,3-cd)pyrene | ND | 380 | ug/kg | 110 |
| Isophorone | ND | 380 | ug/kg | 110 |
| 2-Methylnaphthalene | ND | 380 | ug/kg | 98 |
| 2-Methylphenol | ND | 380 | ug/kg | 67 |
| 3-Methylphenol & 4-Methylphenol | ND | 1200 | ug/kg | 380 |
| Naphthalene | ND | 380 | ug/kg | 95 |
| 2-Nitroaniline | ND | 1900 | ug/kg | 97 |
| 3-Nitroaniline | ND | 1900 | ug/kg | 190 |
| 4-Nitroaniline | ND | 1900 | ug/kg | 100 |
| Nitrobenzene | ND | 380 | ug/kg | 88 |
| 2-Nitrophenol | ND | 380 | ug/kg | 95 |
| 4-Nitrophenol | ND | 2300 | ug/kg | 320 |
| N-Nitrosodiphenylamine | ND | 380 | ug/kg | 100 |
| N-Nitrosodi-n-propyl-amine | ND | 380 | ug/kg | 97 |
| Pentachlorophenol | ND | 2300 | ug/kg | 59 |
| Phenanthrene | ND | 380 | ug/kg | 110 |
| Phenol | ND | 380 | ug/kg | 96 |
| Pyrene | ND | 380 | ug/kg | 110 |
| 1,2,4-Trichloro-benzene | ND | 380 | ug/kg | 96 |
| 2,4,5-Trichloro-phenol | ND | 380 | ug/kg | 96 |
| 2,4,6-Trichloro-phenol | ND | 380 | ug/kg | 97 |
| Hexachlorocyclopenta-diene | ND | 1900 | ug/kg | 72 |
| bis(2-Chloroethyl)-ether | ND | 380 | ug/kg | 94 |
| bis(2-Chloroethoxy) methane | ND | 380 | ug/kg | 100 |

(Continued on next page)

Shaw E & I Inc

Client Sample ID: JWB-TS01

GC/MS Semivolatiles

Lot-Sample #...: G9B170156-002 Work Order #...: K69901AJ Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Chlorophenol-d4 | 68 | (37 - 98 ) |
| 1,2-Dichlorobenzene-d4 | 64 | (23 - 103) |
| 2-Fluorobiphenyl | 68 | (45 - 105) |
| 2-Fluorophenol | 70 | (35 - 105) |
| Nitrobenzene-d5 | 58 | (35 - 100) |
| Phenol-d5 | 71 | (40 - 100) |
| Terphenyl-d14 | 86 | (30 - 125) |
| 2,4,6-Tribromophenol | 90 | (35 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

**Shaw Environmental, Inc.**
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410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation - Volatiles
Test America Laboratories, Inc., SDG G9B170156

**DATE:** March 9, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on February 16, 2009. The samples were analyzed for target compound list (TCL) volatile organic compounds (VOCs) using USEPA SW846 Method 5035/8260B for solid matrices. A total of four samples were validated. The sample IDs are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| JWB-GF01 | G9B170156-001 | 51DW05A | G9B170156-003 |
| JWB-TS01 | G9B170156-002 | 51DW06A | G9B170156-004 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Instrument Performance Results |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| X | | Blank Analysis |
| | X | Laboratory Control Sample |
| | X | Matrix Spike / Spike Duplicate Sample |
| | X | System Monitoring Compounds |
| | X | Internal Standards |
| | X | Field Sample Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. For sample JWB-TS01 (G9B170156-002), acetone was rejected for the undiluted run for exceeding calibration (lab E-flag) for data usability. The second diluted run data should be used reported only for the compounds meeting this condition.

Eric Malarek, Chemist

3/9/09
Date

**RFAAP VALIDATION REPORT**
**VOLATILES REVIEW**
**SDG G9B170156**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of analysis. Holding time criteria: For soil samples cooled @ 4°C±2°C; the maximum holding time is 14 days from sample collection to analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 02/16/09, the coolers were received by the primary laboratory (Test America) on 02/17/09 at 4.0°C, 3.0°C, and 3.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: For the solid samples collected 02/16/09, the VOCs were prepped and analyzed on 02/24/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Instrument Performance Check**
The analysis of the instrument performance check solution must be performed at the beginning of each 12-hour period during which samples are analyzed.

- The instrument performance check, bromofluorobenzene (BFB), met the ion abundance criteria. No qualification was applied.

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used is capable of producing acceptable qualitative and quantitative data for volatile target compounds. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear calibration curve. The RRF must be greater than 0.1 for chloromethane, 1,1-dichloroethane, and bromoform and greater than 0.3 for 1,1,2,2-tetrachloroethane and chlorobenzene. The minimum relative response factor (RRF) must be ≥0.05 for all other compounds. The DoD QSM specifies that the percent relative standard deviation (%RSD) must be ≤15% for each target compound and must be ≤30% for each calibration check compound. For compounds analyzed using linear regression or second order, correlation coefficients must be >0.995 and coefficients of determination >0.99. All detects are qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- For low level initial calibration performed on 02/24/09 on instrument HP11.i, all criteria were met for all target compounds (%RSD≤15% or ≤30%; RRF≥0.05). Compound bromoform ($r^2$=0.9995; quadratic) was quantified using second order regression with coefficient of determination >0.99. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001), JWB-TS01 (G9B170156-002), 51DW05A (G9B170156-003), and 51DW06A (G9B170156-004) apply to this initial calibration.

- For medium level initial calibration performed on 02/11/09 on instrument HP11.i, all criteria were met for all target compound acetone (%RSD≤15% or ≤30%; RRF≥0.05). No qualifiers were applied. Sample JWB-TS01 (G9B170156-002) applies to this initial calibration.

**IV-Continuing Calibration**

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used is capable of producing acceptable qualitative and quantitative data for volatile target compounds. Continuing calibration establishes the 12-hour relative response factors on which the quantitations are based and checks satisfactory performance of the instrument on a day-to-day basis. The RRF must be greater than 0.1 for chloromethane, 1,1-dichloroethane, and bromoform and greater than 0.3 for 1,1,2,2-tetrachloroethane and chlorobenzene. The minimum relative response factor (RRF) must be ≥0.05 for all other compounds. The DoD QSM specifies that the percent difference (%D) between the initial calibration RRF and the continuing calibration RRF must be within 20% for all target compounds. All detects are qualified as estimated "J" for where there were exceeding %Ds, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- For low level initial calibration verification performed on 02/23/09 @12:57 on instrument HP11i, all target compounds were within criteria (%D≤25%; %Drift≤25%; RRF≥0.05; ≤20% if used as continuing calibration). No reported samples apply to this initial calibration verification. No qualifiers were applied.

- For low level continuing calibration performed on 02/24/09 @11:38 on instrument HP11.i, all target compounds were within criteria (%D≤20%; %Drift≤20%; RRF≥0.05). No qualifiers were applied. Acetone was analyzed via medium level extraction for sample JWB-TS01 (G9B170156-002). Samples JWB-GF01 (G9B170156-001), JWB-TS01 (G9B170156-002; 1x), 51DW05A (G9B170156-003), and 51DW06A (G9B170156-004) apply to this continuing calibration.

- For medium level initial calibration verification performed on 02/11/09 @20:47 on instrument HP11i, all target compounds were within criteria (%D≤25%; %Drift≤25%; RRF≥0.05; ≤20% if used as continuing calibration). No reported samples apply to this initial calibration verification. No qualifiers were applied.

- For medium level continuing calibration performed on 02/24/09 @13:08 on instrument HP11.i, acetone was within criteria (%D≤20%; %Drift≤20%; RRF≥0.05). No qualifiers were applied. Sample JWB-TS01 (G9B170156-002) applies to this continuing calibration for acetone.

**V-Blank Analysis**

The purpose of blank analyses is to determine the presence and magnitude of contamination problems resulting from field and laboratory activities. A method blank analysis must be performed after the calibration standards and once every 12-hour time period beginning with the injection of BFB. No contaminants should be detected in any of the associated blanks > the MDL. The DoD QSM criteria specifies all concentrations should be less than one-half MRL (<MRL for common laboratory contaminants methylene chloride, acetone, and 2-butanone). Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants methylene chloride, acetone, and 2-butanone (MEK), or 5 times (5X) the maximum amount for other volatile target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 1) as needed.

## Table 2 Blank Contamination Analysis Summary

| Analysis Date | QC Blank ID | Compound | Max Conc. µg/kg | Action Level µg/kg | B qualified samples |
|---|---|---|---|---|---|
| 02/24/09 | G9B250000-375 | All target <½MRL | NA | NA | None |
| 02/24/09 | G9B250000-269 | Acetone | 100J | 1000 | JWB-TS01 |

J = Estimated Value <MRL and >MDL.
NA = Not Applicable
MRL = Method Reporting Limit
MDL = Method Detection Limit

### VI-Laboratory Control Sample

Data for laboratory control samples (LCS) are evaluated to determine long-term accuracy of the analytical method on various matrices. Percent recoveries (%Rs) should be within the specified control limits. DoD LCS soil recovery limits are specified in Table D-5 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9B250000-375 was used as the solid LCS for the low level VOC analysis on 02/24/09. All criteria were met. No qualifiers were applied. Samples JWB-GF01 (G9B170156-001), JWB-TS01 (G9B170156-002), 51DW05A (G9B170156-003), and 51DW06A (G9B170156-004) apply to this LCS.

- Sample G9B250000-269 was used as the solid LCS for the medium level acetone analysis on 02/24/09. All criteria were met. No qualifiers were applied. Sample JWB-TS01 (G9B170156-002) applies to this LCS.

### VII-Matrix Spike/Matrix Spike Duplicate

Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. The DoD MS/MSD solid recovery limits follow the LCS criteria and are specified in Table D-5 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- No project specific solid MS/MSD was analyzed with this SDG due to insufficient sample volumes; therefore, it was not evaluated.

### VIII-System Monitoring Compounds (Surrogates)

Laboratory performance on individual samples is evaluated through the review of surrogate spike samples. Recoveries for system monitoring compounds in volatile samples and blanks must be within the specified control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria:
Dibromofluoromethane (84-124%) (DoD QSM = None Listed)
1,2-Dichloroethane-d4 (65-142%) (DoD QSM = None Listed)
Toluene-d8 (85-115%) (DoD QSM = 85-115%)
4-Bromofluorobenzene (85-120%) (DoD QSM = 85-120%)

- All criteria were met. No qualifiers were applied.

**IX-Internal Standards (IS)**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Specific criteria include: area counts (-50% to +100%) of the associated calibration standard, and retention time (± 30 seconds) from that of the associated calibration standard.

- All criteria were met. No qualifiers were applied.

**X-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**XI-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J."

- For sample JWB-TS01 (G9B170156-002), acetone was rejected for the undiluted run for exceeding calibration (lab E-flag) for data usability. The second diluted run data should be used reported only for the compounds meeting this condition.

- For all soil samples, sodium bisulfite was added by the laboratory per method 5035 as a preservative. Sodium bisulfite is a reducing agent and known to create ketone concentrations in biologically active soils. This is the probable cause for the detected acetone, 2-hexanone, and 2-butanone (MEK) found in the soil samples. Sample concentrations may be found on the attached form 1s.

**Sample: JWB-GF01 (G9B170156-001), chlorobenzene**

Conc. (µg/kg) = {(Ax)*(Is)*(DF)*(Vp)} / {(Ais)*(RRF)*(Ws)*Fs)}
where:
Ax is the compound area
Is is the corresponding internal standard concentration (ng/mL)
DF is the dilution factor
Vp is the volume purged (mL)
Ais is the corresponding internal standard area
RRF is the relative response factor
Ws is the weight of the sample (g)
Fs is the fraction solids for the sample

Conc. µg/kg = (20032 * 50 ng/mL * 1 * 5mL) / (344676 * 1.11228 * 4.17g * 0.790) =
= 4.0 µg/kg

Reported Conc. = 4.0 µg/kg
%D = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from Region III Modifications to the National Functional Guidelines for Organic Data Review (September 1994).

# Form I Copy

Shaw E & I Inc

Client Sample ID: JWB-GF01

GC/MS Volatiles

**Lot-Sample #...:** G9B170156-001 **Work Order #...:** K699E1A8 **Matrix.....:** SO
**Date Sampled...:** 02/16/09 **Date Received..:** 02/17/09
**Prep Date.....:** 02/24/09 **Analysis Date..:** 02/24/09
**Prep Batch #...:** 9056375
**Dilution Factor:** 1.2
**% Moisture.....:** 21 **Method.....:** SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **55** | **30** | **ug/kg** | **2.1** |
| Benzene | ND | 7.6 | ug/kg | 0.40 |
| Bromodichloromethane | ND | 7.6 | ug/kg | 0.81 |
| Bromoform | ND | 7.6 | ug/kg | 0.61 |
| Bromomethane | ND | 7.6 | ug/kg | 1.3 |
| **2-Butanone (MEK)** | **5.7 J** J | **15** | **ug/kg** | **2.1** |
| Carbon disulfide | ND | 15 | ug/kg | 0.75 |
| Carbon tetrachloride | ND | 7.6 | ug/kg | 0.81 |
| **Chlorobenzene** | **4.0 J** J | **7.6** | **ug/kg** | **0.44** |
| Dibromochloromethane | ND | 7.6 | ug/kg | 0.32 |
| Chloroethane | ND | 7.6 | ug/kg | 0.69 |
| Chloroform | ND | 7.6 | ug/kg | 0.40 |
| Chloromethane | ND | 7.6 | ug/kg | 0.76 |
| 1,1-Dichloroethane | ND | 7.6 | ug/kg | 0.44 |
| 1,2-Dichloroethane | ND | 7.6 | ug/kg | 1.1 |
| cis-1,2-Dichloroethene | ND | 7.6 | ug/kg | 1.4 |
| trans-1,2-Dichloroethene | ND | 7.6 | ug/kg | 0.58 |
| **1,1-Dichloroethene** | **1.1 J** J | **7.6** | **ug/kg** | **0.40** |
| 1,2-Dichloropropane | ND | 7.6 | ug/kg | 0.91 |
| cis-1,3-Dichloropropene | ND | 7.6 | ug/kg | 0.98 |
| trans-1,3-Dichloropropene | ND | 7.6 | ug/kg | 1.1 |
| Ethylbenzene | ND | 7.6 | ug/kg | 0.52 |
| 2-Hexanone | ND | 15 | ug/kg | 1.1 |
| Methylene chloride | ND | 7.6 | ug/kg | 1.3 |
| 4-Methyl-2-pentanone (MIBK) | ND | 15 | ug/kg | 1.4 |
| Styrene | ND | 7.6 | ug/kg | 0.47 |
| 1,1,2,2-Tetrachloroethane | ND | 7.6 | ug/kg | 1.0 |
| Tetrachloroethene | ND | 7.6 | ug/kg | 0.93 |
| Toluene | ND | 7.6 | ug/kg | 0.93 |
| 1,1,1-Trichloroethane | ND | 7.6 | ug/kg | 0.55 |
| 1,1,2-Trichloroethane | ND | 7.6 | ug/kg | 0.67 |
| Trichloroethene | ND | 7.6 | ug/kg | 0.91 |
| Vinyl chloride | ND | 7.6 | ug/kg | 0.55 |
| m-Xylene & p-Xylene | ND | 7.6 | ug/kg | 1.2 |
| o-Xylene | ND | 7.6 | ug/kg | 0.50 |

(Continued on next page)

Shaw E & I Inc

Client Sample ID: JWB-GF01

GC/MS Volatiles

Lot-Sample #...: G9B170156-001 Work Order #...: K699E1A8 Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 88 | (84 - 124) |
| 1,2-Dichloroethane-d4 | 94 | (65 - 142) |
| Toluene-d8 | 95 | (85 - 115) |
| 4-Bromofluorobenzene | 95 | (85 - 120) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Shaw E & I Inc

Client Sample ID: JWB-TS01

GC/MS Volatiles

**Lot-Sample #...:** G9B170156-002 **Work Order #...:** K69901A8 **Matrix.....:** SO
**Date Sampled...:** 02/16/09 **Date Received..:** 02/17/09
**Prep Date.....:** 02/24/09 **Analysis Date..:** 02/24/09
**Prep Batch #...:** 9056375
**Dilution Factor:** 1.18
**% Moisture.....:** 13 **Method.....:** SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **580 E R** | **27** | **ug/kg** | **1.9** |
| Benzene | ND | 6.8 | ug/kg | 0.35 |
| Bromodichloromethane | ND | 6.8 | ug/kg | 0.72 |
| Bromoform | ND | 6.8 | ug/kg | 0.54 |
| Bromomethane | ND | 6.8 | ug/kg | 1.2 |
| **2-Butanone (MEK)** | **43** | **14** | **ug/kg** | **1.9** |
| Carbon disulfide | ND | 14 | ug/kg | 0.66 |
| Carbon tetrachloride | ND | 6.8 | ug/kg | 0.72 |
| **Chlorobenzene** | **0.90 J J** | **6.8** | **ug/kg** | **0.39** |
| Dibromochloromethane | ND | 6.8 | ug/kg | 0.28 |
| Chloroethane | ND | 6.8 | ug/kg | 0.61 |
| Chloroform | ND | 6.8 | ug/kg | 0.35 |
| Chloromethane | ND | 6.8 | ug/kg | 0.68 |
| 1,1-Dichloroethane | ND | 6.8 | ug/kg | 0.39 |
| 1,2-Dichloroethane | ND | 6.8 | ug/kg | 0.99 |
| cis-1,2-Dichloroethene | ND | 6.8 | ug/kg | 1.2 |
| trans-1,2-Dichloroethene | ND | 6.8 | ug/kg | 0.51 |
| 1,1-Dichloroethene | ND | 6.8 | ug/kg | 0.35 |
| 1,2-Dichloropropane | ND | 6.8 | ug/kg | 0.81 |
| cis-1,3-Dichloropropene | ND | 6.8 | ug/kg | 0.87 |
| trans-1,3-Dichloropropene | ND | 6.8 | ug/kg | 1.0 |
| Ethylbenzene | ND | 6.8 | ug/kg | 0.46 |
| **2-Hexanone** | **1.1 J J** | **14** | **ug/kg** | **1.0** |
| Methylene chloride | ND | 6.8 | ug/kg | 1.1 |
| 4-Methyl-2-pentanone (MIBK) | ND | 14 | ug/kg | 1.2 |
| Styrene | ND | 6.8 | ug/kg | 0.42 |
| 1,1,2,2-Tetrachloroethane | ND | 6.8 | ug/kg | 0.92 |
| Tetrachloroethene | ND | 6.8 | ug/kg | 0.83 |
| Toluene | ND | 6.8 | ug/kg | 0.83 |
| 1,1,1-Trichloroethane | ND | 6.8 | ug/kg | 0.49 |
| 1,1,2-Trichloroethane | ND | 6.8 | ug/kg | 0.60 |
| Trichloroethene | ND | 6.8 | ug/kg | 0.81 |
| Vinyl chloride | ND | 6.8 | ug/kg | 0.49 |
| m-Xylene & p-Xylene | ND | 6.8 | ug/kg | 1.1 |
| o-Xylene | ND | 6.8 | ug/kg | 0.45 |

(Continued on next page)

Shaw E & I Inc

Client Sample ID: JWB-TS01

GC/MS Volatiles

Lot-Sample #...: G9B170156-002 Work Order #...: K69901A8 Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 104 | (84 - 124) |
| 1,2-Dichloroethane-d4 | 113 | (65 - 142) |
| Toluene-d8 | 107 | (85 - 115) |
| 4-Bromofluorobenzene | 108 | (85 - 120) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: JWB-TS01

GC/MS Volatiles

Lot-Sample #...: G9B170156-002 Work Order #...: K69901CE Matrix.....: SO
Date Sampled...: 02/16/09 Date Received..: 02/17/09
Prep Date.....: 02/24/09 Analysis Date..: 02/24/09
Prep Batch #...: 9056269
Dilution Factor: 1.03
% Moisture.....: 13 Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | 140 J,B | 590 | ug/kg | 59 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 89 | (84 - 124) |
| 1,2-Dichloroethane-d4 | 91 | (65 - 142) |
| Toluene-d8 | 96 | (85 - 115) |
| 4-Bromofluorobenzene | 96 | (85 - 120) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51DW05A

GC/MS Volatiles

Lot-Sample #...: G9B170156-003 Work Order #...: K69921AA Matrix.....: SO
Date Sampled...: 02/16/09 Date Received..: 02/17/09
Prep Date.....: 02/24/09 Analysis Date..: 02/24/09
Prep Batch #...: 9056375
Dilution Factor: 1.13
% Moisture.....: Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | 5.6 | ug/kg | 0.77 |
| Tetrachloroethene | ND | 5.6 | ug/kg | 0.69 |
| Toluene | ND | 5.6 | ug/kg | 0.69 |
| **Acetone** | **160** | **23** | **ug/kg** | **1.6** |
| Benzene | ND | 5.6 | ug/kg | 0.29 |
| Bromodichloromethane | ND | 5.6 | ug/kg | 0.60 |
| Bromoform | ND | 5.6 | ug/kg | 0.45 |
| Bromomethane | ND | 5.6 | ug/kg | 0.97 |
| **2-Butanone (MEK)** | **8.8 J** J | **11** | **ug/kg** | **1.6** |
| Carbon disulfide | ND | 11 | ug/kg | 0.55 |
| Carbon tetrachloride | ND | 5.6 | ug/kg | 0.60 |
| **Chlorobenzene** | **0.81 J** J | **5.6** | **ug/kg** | **0.33** |
| Dibromochloromethane | ND | 5.6 | ug/kg | 0.24 |
| Chloroethane | ND | 5.6 | ug/kg | 0.51 |
| Chloroform | ND | 5.6 | ug/kg | 0.29 |
| Chloromethane | ND | 5.6 | ug/kg | 0.56 |
| 1,1-Dichloroethane | ND | 5.6 | ug/kg | 0.33 |
| 1,2-Dichloroethane | ND | 5.6 | ug/kg | 0.82 |
| cis-1,2-Dichloroethene | ND | 5.6 | ug/kg | 1.0 |
| trans-1,2-Dichloroethene | ND | 5.6 | ug/kg | 0.43 |
| 1,1-Dichloroethene | ND | 5.6 | ug/kg | 0.29 |
| 1,2-Dichloropropane | ND | 5.6 | ug/kg | 0.68 |
| cis-1,3-Dichloropropene | ND | 5.6 | ug/kg | 0.72 |
| trans-1,3-Dichloropropene | ND | 5.6 | ug/kg | 0.85 |
| Ethylbenzene | ND | 5.6 | ug/kg | 0.38 |
| 2-Hexanone | ND | 11 | ug/kg | 0.84 |
| Methylene chloride | ND | 5.6 | ug/kg | 0.95 |
| 4-Methyl-2-pentanone (MIBK) | ND | 11 | ug/kg | 1.0 |
| Styrene | ND | 5.6 | ug/kg | 0.35 |
| 1,1,1-Trichloroethane | ND | 5.6 | ug/kg | 0.41 |
| 1,1,2-Trichloroethane | ND | 5.6 | ug/kg | 0.50 |
| Trichloroethene | ND | 5.6 | ug/kg | 0.68 |
| Vinyl chloride | ND | 5.6 | ug/kg | 0.41 |
| m-Xylene & p-Xylene | ND | 5.6 | ug/kg | 0.92 |
| o-Xylene | ND | 5.6 | ug/kg | 0.37 |

(Continued on next page)

Shaw E & I Inc

Client Sample ID: 51DW05A

GC/MS Volatiles

Lot-Sample #...: G9B170156-003 Work Order #...: K69921AA Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 95 | (84 - 124) |
| 1,2-Dichloroethane-d4 | 103 | (65 - 142) |
| Toluene-d8 | 99 | (85 - 115) |
| 4-Bromofluorobenzene | 103 | (85 - 120) |

NOTE(S):

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51DW06A

GC/MS Volatiles

Lot-Sample #...: G9B170156-004
Date Sampled...: 02/16/09
Prep Date.....: 02/24/09
Prep Batch #...: 9056375
Dilution Factor: 1.31
% Moisture.....:

Work Order #...: K69941AA
Date Received..: 02/17/09
Analysis Date..: 02/24/09

Matrix.....: SO

Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | 6.6 | ug/kg | 0.89 |
| Tetrachloroethene | ND | 6.6 | ug/kg | 0.80 |
| Toluene | ND | 6.6 | ug/kg | 0.80 |
| **Acetone** | **160** | **26** | **ug/kg** | **1.8** |
| Benzene | ND | 6.6 | ug/kg | 0.34 |
| Bromodichloromethane | ND | 6.6 | ug/kg | 0.69 |
| Bromoform | ND | 6.6 | ug/kg | 0.52 |
| Bromomethane | ND | 6.6 | ug/kg | 1.1 |
| **2-Butanone (MEK)** | **10 J** J | **13** | **ug/kg** | **1.8** |
| Carbon disulfide | ND | 13 | ug/kg | 0.64 |
| Carbon tetrachloride | ND | 6.6 | ug/kg | 0.69 |
| **Chlorobenzene** | **0.95 J** J | **6.6** | **ug/kg** | **0.38** |
| Dibromochloromethane | ND | 6.6 | ug/kg | 0.28 |
| Chloroethane | ND | 6.6 | ug/kg | 0.59 |
| Chloroform | ND | 6.6 | ug/kg | 0.34 |
| Chloromethane | ND | 6.6 | ug/kg | 0.66 |
| 1,1-Dichloroethane | ND | 6.6 | ug/kg | 0.38 |
| 1,2-Dichloroethane | ND | 6.6 | ug/kg | 0.96 |
| cis-1,2-Dichloroethene | ND | 6.6 | ug/kg | 1.2 |
| trans-1,2-Dichloroethene | ND | 6.6 | ug/kg | 0.50 |
| 1,1-Dichloroethene | ND | 6.6 | ug/kg | 0.34 |
| 1,2-Dichloropropane | ND | 6.6 | ug/kg | 0.79 |
| cis-1,3-Dichloropropene | ND | 6.6 | ug/kg | 0.84 |
| trans-1,3-Dichloropropene | ND | 6.6 | ug/kg | 0.98 |
| Ethylbenzene | ND | 6.6 | ug/kg | 0.45 |
| 2-Hexanone | ND | 13 | ug/kg | 0.97 |
| Methylene chloride | ND | 6.6 | ug/kg | 1.1 |
| 4-Methyl-2-pentanone (MIBK) | ND | 13 | ug/kg | 1.2 |
| Styrene | ND | 6.6 | ug/kg | 0.41 |
| 1,1,1-Trichloroethane | ND | 6.6 | ug/kg | 0.47 |
| 1,1,2-Trichloroethane | ND | 6.6 | ug/kg | 0.58 |
| Trichloroethene | ND | 6.6 | ug/kg | 0.79 |
| Vinyl chloride | ND | 6.6 | ug/kg | 0.47 |
| m-Xylene & p-Xylene | ND | 6.6 | ug/kg | 1.1 |
| o-Xylene | ND | 6.6 | ug/kg | 0.43 |

(Continued on next page)

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51DW06A

GC/MS Volatiles

Lot-Sample #...: G9B170156-004 Work Order #...: K69941AA Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 96 | (84 - 124) |
| 1,2-Dichloroethane-d4 | 104 | (65 - 142) |
| Toluene-d8 | 101 | (85 - 115) |
| 4-Bromofluorobenzene | 102 | (85 - 120) |

NOTE(S):

J Estimated result. Result is less than RL.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Aluminum and Lead
Test America Laboratories, Inc., SDG G9C050192

**DATE:** May 1, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on March 04, 2009. Solid samples were analyzed for aluminum and lead using USEPA SW-846 3050B/6010B for ICP metals. A total of fourteen solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC01 | G9C050192-001 | 51SC08 | G9C050192-008 |
| 51SC02 | G9C050192-002 | 51SC09 | G9C050192-009 |
| 51SC03 | G9C050192-003 | 51SC10 | G9C050192-010 |
| 51SC04 | G9C050192-004 | 51SC11 | G9C050192-011 |
| 51SC05 | G9C050192-005 | 51SC12 | G9C050192-012 |
| 51SC06 | G9C050192-006 | 51SC13 | G9C050192-013 |
| 51SC07 | G9C050192-007 | 51SC14 | G9C050192-014 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Blank Analysis |
| | X | ICP Interference Check Sample (ICS) |
| | X | Laboratory Control Sample (LCS) |
| | X | Laboratory Sample Duplicate |
| | X | Matrix Spike and Spike Duplicate |
| | X | ICP Serial Dilution |
| X | | Field Sample Duplicate |
| | X | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

5/1/09
Date

**RFAAP VALIDATION REPORT**
**METALS REVIEW**
**SDG G9C050192**

## I-Holding Times and Preservation

The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: For solid matrices, the samples are shipped at ambient temperature for ICP metals (cool @4°C±2°C if with other tests) with a maximum holding time is 180 days.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/04/09, the coolers were received by the primary laboratory (Test America) on 03/05/09 at 4.0°C, 3.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 03/04/09 for metals analysis. For solid samples, the soil samples were digested on 03/09/09 and analyzed on 03/09/09 for ICP metals. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Initial and Continuing Calibration

Requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

ICP: 1- blank (DoD QSM <½ MRL)
3 – standards (r≥0.995)
ICV/CCV (90-110%) (DoD QSM 90-110%)
MRL (70-130%) (DoD QSM 80-120%)
High Std. (95-105%)

- The solid samples were analyzed for ICP metals on 03/09/09. All ICV/CCV/High Standard/MRL criteria were met for aluminum and lead for all runs. No qualifiers were applied.

## III-Blanks

Blanks (preparation and calibration blanks) are assessed to determine the existence and magnitude of contamination problems. No contaminants should be detected (i.e. <MDL) in any of the associated blanks. DoD QSM limits are <½MRL for the method blank and <2*MDL for the calibration blanks. Samples are qualified "B" when they are less than 5x the absolute value of the maximum blank concentration. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10 for ICP) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | Analysis | QC Blank ID | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 03/09/09 | ICP Al & Pb | ICB/CCBs | <2*MDL | NA | None |
| 03/09/09 | ICP Al & Pb | G9C090000-129 | <1/2*MRL | NA | None |

NA = Not Applicable
MDL = Method Detection Limit.
MRL = Method Reporting Limit.

**IV-ICP Interference Check Sample (ICS)**
The ICP interference check sample (ICS) verifies interelement and background correction factors. ICP Interference Check is performed at the beginning and end of each sample analysis run. Control limits are 80-120% (DoD QSM limits 80-120%).

- All criteria were met. No qualifiers were applied.

**V-Laboratory Control Samples (LCS)**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All aqueous LCS results must fall within the control limits. The DoD QSM solid LCS recovery limits are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9C090000-129 was used as solid LCS for ICP metals analysis on 03/09/09. All criteria were met. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC02 (G9C050192-002), 51SC03 (G9C050192-003), 51SC04 (G9C050192-004), 51SC05 (G9C050192-005), 51SC06 (G9C050192-006), 51SC07 (G9C050192-007), 51SC08 (G9C050192-008), 51SC09 (G9C050192-009), 51SC10 (G9C050192-010), 51SC11 (G9C050192-011), 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014) apply to this LCS.

**VI-Laboratory Duplicate Sample Analysis**
Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits. DoD QSM limits for metals are 20% RPD for ICP metals.

- No laboratory duplicate was analyzed. Laboratory precision was evaluated using the Matrix Spike and Matrix Spike Duplicate (Section VII).

**VII-Matrix Spike/Spike Duplicate**
MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Specific criteria include the analyses of matrix spike and matrix spike duplicate samples at a frequency of one MS and MSD per 20 samples of similar matrix. MS and MSD recoveries and relative percent differences between MS and MSD recoveries should be within the specified limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used. Post digestion spikes limits are 75-125% for ICP metals.

- Sample 51SC01 (G9C050192-001) was used as solid laboratory MS/MSD for ICP metals analysis on 03/09/09. Aluminum (4120%, 5310%) was outside criteria. All other recoveries and RPD values were within criteria. The associated LCS (Section V) was within criteria. The sample concentration was >4 times the spike added for aluminum; therefore, no qualifiers were applied based upon this outlier. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC02 (G9C050192-002), 51SC03 (G9C050192-003), 51SC04 (G9C050192-004), 51SC05 (G9C050192-005), 51SC06 (G9C050192-006), 51SC07 (G9C050192-007), 51SC08 (G9C050192-008), 51SC09 (G9C050192-009), 51SC10 (G9C050192-010), 51SC11 (G9C050192-011), 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014) apply to this MS/MSD.

**VIII-ICP Serial Dilution**
An ICP serial dilution is performed to determine whether significant physical or chemical interferences exist due to sample matrix at high concentrations. An analysis of a 5-fold dilution should agree within 10% difference of the original result when the concentration in sample is a factor of 50 above MDL.

- The serial dilution for ICP metals was analyzed on 03/09/09 using solid sample 51SC01 (G9C050192-001). All criteria were met for aluminum and lead. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC02 (G9C050192-002), 51SC03 (G9C050192-003), 51SC04 (G9C050192-004), 51SC05 (G9C050192-005), 51SC06 (G9C050192-006), 51SC07 (G9C050192-007), 51SC08 (G9C050192-008), 51SC09 (G9C050192-009), 51SC10 (G9C050192-010), 51SC11 (G9C050192-011), 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014) apply to this serial dilution.

**IX-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 35% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- Field soil sample duplicate pair 51SC01 (G9C050192-001) and 51SC01D (G9C110192-013) was collected for aluminum and lead. Aluminum was detected in the original sample at 17200 mg/kg and the field duplicate pair at 32100 mg/kg resulting in a RPD of 60.5%. Lead was detected in the original sample at 10.8 mg/kg and the field duplicate pair at 20.4 mg/kg resulting in a RPD of 61.5%. The duplicate pair was qualified estimated "J" for aluminum and lead based upon the high RPDs.

- Field soil sample duplicate pair 51SC07 (G9C050192-007) and 51SC07D (G9C110192-014) was collected for aluminum and lead. Aluminum was detected in the original sample at 20100 mg/kg and the field duplicate pair at 25300 mg/kg resulting in a RPD of 22.9%. Lead was detected in the original sample at 12.5 mg/kg and the field duplicate pair at 10.8 mg/kg resulting in a RPD of 14.6%. All criteria were met. No qualifiers were applied.

**X-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification.

**Sample: 51SC01 (G9C050192-001), Lead**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(92.58 µg/L)*(0.100 L)*(1)} / {(1.05 g)*(0.8192)} = 10.8 µg/g = 10.8 mg/kg

Reported concentration = 10.8 mg/kg
%D = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC01**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-001 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **17200** J | **25.6** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K73301AE** |
| | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| **Lead** | **10.8** J | **2.4** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K73301AW** |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO2**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-002 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **19600** | **25.2** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734A1AD** |
| | | Dilution Factor: 1 | | MDL.....: 8.4 | | |
| **Lead** | **14.7** | **2.4** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734A1AV** |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO3**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-003 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **22300** | **25.9** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734J1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| **Lead** | **9.8** | **2.5** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734J1A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC04**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-004 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **21400** | **25.6** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734L1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| **Lead** | **11.0** | **2.4** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734L1A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO5**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-005 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 16

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **20100** | **25.0** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734M1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 8.3 | | |
| **Lead** | **9.1** | **2.4** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734M1A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 5ISC06

TOTAL Metals

Lot-Sample #...: G9C050192-006 Matrix.....: SO
Date Sampled...: 03/04/09 Date Received..: 03/05/09
% Moisture.....: 8.7

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9068129 | | | | | | |
| Aluminum | 12000 | 23.0 | mg/kg | SW846 6010B | 03/09/09 | K734N1AJ |
| | | Dilution Factor: 1 | | MDL.....: 7.7 | | |
| Lead | 6.4 | 2.2 | mg/kg | SW846 6010B | 03/09/09 | K734N1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.66 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO7**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-007 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 13

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **20100** | **24.2** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734R1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 8.1 | | |
| **Lead** | **12.5** | **2.3** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734R1A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.69 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO8**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-008 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 21

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **23300** | **26.7** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734V1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 8.9 | | |
| **Lead** | **11.8** | **2.5** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734V1A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.76 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO9**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-009 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 25

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **33600** | **28.0** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734W1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 9.3 | | |
| **Lead** | **12.6** | **2.7** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734W1A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.80 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC10**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-010 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 20

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **30500** | **26.3** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734X1AL** |
| | | Dilution Factor: 1 | | MDL.....: 8.8 | | |
| **Lead** | **15.1** | **2.5** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K734X1A4** |
| | | Dilution Factor: 1 | | MDL.....: 0.75 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC11**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-011 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 20

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **18200** | **26.1** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K73401AJ** |
| | | Dilution Factor: 1 | | MDL.....: 8.7 | | |
| **Lead** | **34.1** | **2.5** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K73401A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.75 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC12**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-012 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 9.2

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **7710** | **23.1** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K73441AJ** |
| | | Dilution Factor: 1 | | MDL.....: 7.7 | | |
| **Lead** | **4.9** | **2.2** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K73441A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.66 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC13**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-013 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **15500** | **25.6** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K73471AJ** |
| | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| **Lead** | **309** | **2.4** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K73471A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC14**

**TOTAL Metals**

**Lot-Sample #...:** G9C050192-014 **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**% Moisture.....:** 20

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9068129 | | | | | | |
| **Aluminum** | **15700** | **26.1** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K735A1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 8.7 | | |
| **Lead** | **86.7** | **2.5** | **mg/kg** | **SW846 6010B** | **03/09/09** | **K735A1A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.75 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Dioxin Furans
Test America Laboratories, Inc., SDG G9C050192

**DATE:** May 1, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on March 04, 2009. The samples were analyzed for Dioxin Furan compounds using USEPA SW-846 Method 8290 High Resolution Gas Chromatography/High Resolution Mass Spectroscopy (HRGC/HRMS). A total of three soil samples (one diluted sample included) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC01 | G9C050192-001 | 51SC11 | G9C050192-011DL |
| 51SC11 | G9C050192-011 | | |

Data were reviewed and validated using a combination of project QAPP, *DOD Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *USEPA Region III Dioxin/Furan Data Validation Guidance* (March, 1999). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Internal Standards (IS) Recovery Standard Solutions |
| | X | Cleanup Standards |
| | X | Laboratory Control Standard or Ongoing Precision Result (OPR) |
| | X | Matrix Spike and Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. For where the target compound OCDD exceeded the calibration range for sample 51SC11 (G9C050192-011), the data point was qualified rejected "R" for data usability. The second diluted run data reported should be used only for the compounds meeting this condition. There were no impacts to the data completeness.

E. Malarek

Eric Malarek, Chemist

5/1/09

Date

**RFAAP VALIDATION REPORT**
**DIOXIN FURAN REVIEW**
**SDG G9C050192**

## I-Holding Times and Preservation

The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, dioxin and furans are shipped cooled (@4°C ± 2°C) with a maximum holding time of 30 days from sample collection to preparative extraction and 45 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/04/09, the coolers were received by the primary laboratory (Test America) on 03/05/09 at 4.0°C, 3.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: For the soil samples collected 03/04/09, the dioxins and furans were extracted on 03/05/09 and analyzed on 03/07/09 and 03/10/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Blank Analysis

The purpose of laboratory (or field) blank analyses is to determine the existence and magnitude of contamination problems resulting from field and laboratory activities. No contamination should be found in any of the blanks >EDL (estimated detection limit). The DoD QSM criteria specifies all concentrations should be less than ½ MRL (<MRL for common laboratory contaminants OCDD and OCDF) and <2*EDL for the calibration blanks. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants OCDD or OCDF, or 5 times (5X) the maximum amount for other target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 100) if needed. The soil samples were sampled with directly into the sample jars from the excavator bucket; therefore, no rinse blank applies to these samples.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. pg/g | Action Level pg/g | B qualified samples |
|---|---|---|---|---|---|
| 03/07/09 | G9C050000-370B | OCDD | 0.70J | 7.00 | None |

J = Estimated value >EDL and <MRL.

## III-Instrument Performance Check

Instrument must be tuned with perfluorokerosene (PFK) to achieve a static resolving power of at least 10,000 (10% valley) and lock-mass ion between lowest and highest masses for each descriptor and level of reference compound ≤10%. Documentation of the mass spectrometer resolving power is accomplished by recording the peak profile of the high-mass reference signal (typically m/z 330.9792) obtained during a peak examination by using the low-mass PFK ion at m/z 292.9825 or lower in mass as reference. At the beginning of the each 12-hour period, the chromatographic resolution is verified in the same fashion as in the initial calibration through the analysis of HRCC solution on the DB-5 (or equivalent) column or through the analysis of the column performance solution on the SP-2331 or SP-225 (or equivalent) column. A 25% valley must be achieved between the close eluters.

- All PFK forms were verified and found to be in compliance with method specification. No qualifiers were applied.

**IV-Initial Calibration**
Once the window defining mix has been analyzed and the descriptor switching times have been verified, the five point calibration solutions can be analyzed prior to sample analysis. Per method and DoD QSM, the initial calibration criteria are as follows:

- The percent relative standard deviations for the mean response factors RRF(n) from the 17 unlabeled standards must not exceed ±20%, and those for the labeled reference compounds must not exceed ±30%;
- The signal to noise ratio ≥10% for all target ions;
- Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For initial calibration performed on 03/06/09 for all target compounds on instrument 1D5, all criteria were met. No qualifiers were applied. Samples 51SC01 (G9C050192-001) and 51SC11 (G9C050192-011) apply to this initial calibration.

- For initial calibration performed on 02/11/09 for all target compounds on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 51SC11 (G9C050192-011DL) applies to this initial calibration.

- For TCDF and TCDD initial calibration performed on 12/30/08 for all target compounds on instrument 5D2, all criteria were met. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC11 (G9C050192-011), and 51SC11 (G9C050192-011DL) apply to this initial calibration.

**V-Continuing Calibration**
The continuing calibration consists of two parts: evaluation of the mass resolution and retention time check. Per method and DoD QSM, the following stipulates the continuing calibration criteria.

- The signal signal-to-noise ratio (S/N) must be at least 10:1 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard for each analyte.
- The relative response factor of each analyte for the unlabeled standard must be within ±20% of the average RF obtained from the initial calibration, and the RRF of each labeled standard must be within ±30% of the average RRF established during initial calibration. This is expressed in term of percent difference %D.
- Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For continuing calibration performed on 03/06/09 @23:02 on instrument 1D5, all criteria were met. No qualifiers were applied. Samples 51SC01 (G9C050192-001) and 51SC11 (G9C050192-011) apply to this continuing calibration.

- For continuing calibration performed on 03/07/09 @09:03 on instrument 1D5, all criteria were met. No qualifiers were applied. Samples 51SC01 (G9C050192-001) and 51SC11 (G9C050192-011) apply to this continuing calibration.

- For continuing calibration performed on 03/10/09 @13:11 on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 51SC11 (G9C050192-011DL) applies to this continuing calibration.

- For continuing calibration performed on 03/10/09 @20:22 on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 51SC11 (G9C050192-011DL) applies to this continuing calibration.

- For TCDF and TCDD continuing calibration performed on 03/09/09 @11:43 on instrument 5D2, all criteria were met. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC11 (G9C050192-011), and 51SC11 (G9C050192-011DL) apply to this continuing calibration.

- For TCDF and TCDD continuing calibration performed on 03/09/09 @14:23 on instrument 5D2, all criteria were met. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC11 (G9C050192-011), and 51SC11 (G9C050192-011DL) apply to this continuing calibration.

**VI-Internal Standards (IS) Recovery Standard Solutions**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Specific criteria include: Recoveries of the isotopically-labeled recovery standards to fall within the 40 to 135 percent range for the tetra- through octachlorinated congeners, or as stated in the data package (DoD QSM limits 40-135%).

- All criteria were met. No qualifiers were applied.

**VII-Cleanup Standards**
Cleanup standards are added to every sample, blank, quality control sample, and calibration solution. This compound is added to the samples after extraction but prior to cleanup and is used to verify the percent recovery obtained using the isotope dilution technique. The control limits are 40 to 135 percent (DoD QSM limits 40-135%).

- All criteria were met. No qualifiers were applied.

**VIII-Laboratory Control Standard (LCS) or Ongoing Precision Result (OPR)**
LCSs are used to monitor laboratory accuracy and precision by calculating the percent recoveries of the spiked compounds. Per DOD QSM and method criteria, acceptable performance is determined by:

1. Recoveries of the isotopically-labeled extraction standards to fall within 40-135% control limits for the tetra- through octachlorinated congeners, or as stated in the data package;

2. Recoveries (accuracy) of the unlabeled compounds should be within $\pm$35% when spiked at the method quantitation limit and within $\pm$30% when spiked above 20 times the method quantitation limit, or as stated in the data package;

3. When duplicate OPR are required, the relative percent difference (RPD) of the unlabeled analytes concentrations should be within 30% when spiked at the method quantitation limit and within $\pm$20% when spiked above 20 times the method quantitation limit.

- Sample G9C050000-370 was used as LCS and LCSD on 03/07/09 analytical run. All criteria were met. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC11 (G9C050192-011), and 51SC11 (G9C050192-011DL) apply to this LCS.

**IX-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. Per DoD QSM, MS/MSD recoveries must be within in-house laboratory limits (75-125%) and RPD ≤20%.

- No project specific soil matrix MS/MSD was performed in this SDG; therefore, it was not evaluated.

**X-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid matrix samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific aqueous field duplicate was performed in this SDG; therefore, it was not evaluated.

**XI-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification. Any value reported by the laboratory as estimated based on an analyte to internal standard ratio below the calibration curve was qualified as estimated "J". The signal signal-to-noise ratio (S/N) must be greater than 2.5 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard. Any detected value with ether interference was qualified as estimated "J". For where the ion ratio failed the 25% criteria (JA-lab flag), the estimated maximum possible concentration (EMPC) was reported and flagged estimated "J". For where presence of quantitation interference, the date was flagged estimated "J" for detects and "UJ" for non-detects.

- For sample 51SC11 (G9C050192-011), target compound OCDD exceeded the calibration range (E-lab flag), the data point was qualified rejected "R" for data usability. The second diluted run data reported should be used only for the compounds meeting this condition. There were no impacts to the data completeness.

- For sample 51SC11 (G9C050192-011), target compounds 1,2,3,7,8,9-HxCDD, 1,2,3,6,7,8-HxCDD, 2,3,4,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDD, 1,2,3,6,7,8-HxCDF, and 1,2,3,4,7,8-HxCDD were qualified estimated "J" as estimated maximum possible concentration based upon ion ratio failed the 25% criteria.

**Sample: 51SC01 (G9C050192-001), OCDD**

A(x) = sum of the integrated ion abundances of the quantitation ions for the unlabeled ions;

A(is) = sum of the integrated ion abundances of the quantitation ions for the labeled ions;

Q(is) = quantity, in pg, of the internal standard added to the sample before extraction; Here need to multiply concentration (pg/uL) by final extract volume (uL).

W = weight, in g, of the sample (solid or organic liquid) as dry weight, or volume in mL of an aqueous sample; and

Avg. RRF(n) = calculated mean relative response factor for the unlabeled analyte.

$$\text{Conc. (ng/kg)} = \frac{(A(x)) * Q(is)}{A(is) * W * \text{Avg. RRF}} = \frac{(1457154000)*4.0*1000}{(242948000) * (10.140 * 0.8192) * 1.091} =$$

= 2647 ng/kg = 2600 pg/g

Reported Value = 2600 pg/g
% Difference = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% RPD for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitaion limit may be inaccurate or imprecise. |
| N | Tenative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identificaition questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitaion limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from USEPA Region III Dioxin/Furan Data Validation Guidance (March, 1999) and Region III Modifications to the National Functional Guidelines for Organic Data Review (September 1994).

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 5ISCO1**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C050192 - 001 | **Work Order #....:** | K73301AC | **Matrix....:** | SO |
| **Date Sampled....:** | 03/04/09 | **Date Received....:** | 03/05/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/05/09 | **Analysis Date....:** | 03/07/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9064370 | **Instrument ID....:** | 1D5 | | |
| **Initial Wgt/Vol :** | 10.14 g | **Analyst ID....:** | Sylvia H. Krenn | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.33 | pg/g |
| Total TCDD | ND | | 1.2 | 0.33 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 6.0 | 0.62 | pg/g |
| Total PeCDD | ND | | 6.0 | 0.62 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 6.0 | 0.48 | pg/g |
| **1,2,3,6,7,8-HxCDD** | **0.51** | **J JA J** | **6.0** | **0.35** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.45** | **J JA J** | **6.0** | **0.37** | **pg/g** |
| **Total HxCDD** | **3.6** | | **6.0** | **0.39** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **26** | | **6.0** | **0.73** | **pg/g** |
| **Total HpCDD** | **48** | | **6.0** | **0.73** | **pg/g** |
| **OCDD** | **2600** | **B** | **12** | **5.7** | **pg/g** |
| **2,3,7,8-TCDF** | **1.4** | **CON J** | **1.2** | **0.57** | **pg/g** |
| **Total TCDF** | **3.5** | | **1.2** | **0.21** | **pg/g** |
| 1,2,3,7,8-PeCDF | ND | | 6.0 | 0.35 | pg/g |
| **2,3,4,7,8-PeCDF** | **0.51** | **J J** | **6.0** | **0.38** | **pg/g** |
| **Total PeCDF** | **1.2** | | **6.0** | **0.37** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.85** | **J J** | **6.0** | **0.31** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.34** | **J J** | **6.0** | **0.24** | **pg/g** |
| 2,3,4,6,7,8-HxCDF | ND | | 6.0 | 0.29 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 6.0 | 0.32 | pg/g |
| **Total HxCDF** | **3.3** | | **6.0** | **0.29** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **2.5** | **J J** | **6.0** | **0.29** | **pg/g** |
| 1,2,3,4,7,8,9-HpCDF | ND | | 6.0 | 0.34 | pg/g |
| **Total HpCDF** | **7.3** | | **6.0** | **0.32** | **pg/g** |
| **OCDF** | **7.8** | **J J** | **12** | **0.44** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 5ISCO1**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C050192 - 001 | **Work Order #....:** | K73301AC | **Matrix....:** | SO |
| **Date Sampled....:** | 03/04/09 | **Date Received....:** | 03/05/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/05/09 | **Analysis Date....:** | 03/07/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9064370 | **Instrument ID....:** | 1D5 | | |
| **Initial Wgt/Vol :** | 10.14 g | **Analyst ID....:** | Sylvia H. Krenn | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 79 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 74 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 75 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 75 | 40 - 135 |
| 13C-OCDD | 80 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 79 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 78 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 74 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 74 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

JA The analyte was positively identified, but the quantitation is an estimate.

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 5ISC11**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C050192 - 011 | **Work Order #....:** | K73401A5 | **Matrix....:** | SO |
| **Date Sampled....:** | 03/04/09 | **Date Received....:** | 03/05/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/05/09 | **Analysis Date....:** | 03/07/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9064370 | **Instrument ID....:** | 1D5 | | |
| **Initial Wgt/Vol :** | 10.27 g | **Analyst ID....:** | Sylvia H. Krenn | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.20 | pg/g |
| Total TCDD | ND | | 1.2 | 0.20 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 6.1 | 0.42 | pg/g |
| Total PeCDD | ND | | 6.1 | 0.42 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.45** | **J JA J** | **6.1** | **0.32** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **1.3** | **J J** | **6.1** | **0.24** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.96** | **J JA J** | **6.1** | **0.25** | **pg/g** |
| **Total HxCDD** | **7.7** | | **6.1** | **0.27** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **55** | | **6.1** | **0.68** | **pg/g** |
| **Total HpCDD** | **100** | | **6.1** | **0.68** | **pg/g** |
| **OCDD** | **5800** | **E R** | **12** | **6.6** | **pg/g** |
| **2,3,7,8-TCDF** | **2.0** | **CON** | **1.2** | **0.16** | **pg/g** |
| **Total TCDF** | **7.9** | | **1.2** | **0.16** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.48** | **J J** | **6.1** | **0.25** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **0.98** | **J JA J** | **6.1** | **0.27** | **pg/g** |
| **Total PeCDF** | **3.6** | | **6.1** | **0.26** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **1.6** | **J J** | **6.1** | **0.21** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.45** | **J JA J** | **6.1** | **0.17** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.25** | **J JA J** | **6.1** | **0.20** | **pg/g** |
| 1,2,3,7,8,9-HxCDF | ND | | 6.1 | 0.22 | pg/g |
| **Total HxCDF** | **7.3** | | **6.1** | **0.20** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **6.3** | | **6.1** | **0.17** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **0.60** | **J J** | **6.1** | **0.21** | **pg/g** |
| **Total HpCDF** | **20** | | **6.1** | **0.19** | **pg/g** |
| **OCDF** | **21** | | **12** | **0.22** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 5ISC11**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C050192 - 011 | **Work Order #....:** | K73401A5 | **Matrix....:** | SO |
| **Date Sampled....:** | 03/04/09 | **Date Received....:** | 03/05/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/05/09 | **Analysis Date....:** | 03/07/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9064370 | **Instrument ID....:** | 1D5 | | |
| **Initial Wgt/Vol :** | 10.27 g | **Analyst ID....:** | Sylvia H. Krenn | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 80 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 75 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 80 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 82 | 40 - 135 |
| 13C-OCDD | 86 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 80 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 79 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 81 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 78 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

| | |
|---|---|
| CON | Confirmation analysis. |
| E | Estimated result. Result concentration exceeds the calibration range. |
| J | Estimated Result. |
| JA | The analyte was positively identified, but the quantitation is an estimate. |

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 5ISC11**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C050192 - 011 | **Work Order #....:** | K73402A5 | **Matrix.....:** | SO |
| **Date Sampled....:** | 03/04/09 | **Date Received....:** | 03/05/09 | **Dilution Factor:** | 10 |
| **Prep Date....:** | 03/05/09 | **Analysis Date....:** | 03/10/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9064370 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.27 g | **Analyst ID....:** | Sylvia H. Krenn | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | R | 12 | 1.5 | pg/g |
| Total TCDD | ND | | 12 | 1.5 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 61 | 1.2 | pg/g |
| Total PeCDD | ND | | 61 | 1.2 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 61 | 0.82 | pg/g |
| **1,2,3,6,7,8-HxCDD** | **1.5** | **J JA** | **61** | **0.66** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **1.6** | **J JA** | **61** | **0.65** | **pg/g** |
| **Total HxCDD** | **9.3** | | **61** | **0.70** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **110** | | **61** | **2.4** | **pg/g** |
| **Total HpCDD** | **210** | | **61** | **2.4** | **pg/g** |
| **OCDD** | **5700** | **B** | **120** | **2.9** | **pg/g** |
| 2,3,7,8-TCDF | ND | R | 12 | 2.1 | pg/g |
| Total TCDF | ND | | 12 | 2.1 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 61 | 1.0 | pg/g |
| **2,3,4,7,8-PeCDF** | **1.4** | **J** | **61** | **1.1** | **pg/g** |
| **Total PeCDF** | **3.6** | | **61** | **1.1** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **1.3** | **J JA** | **61** | **0.66** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.65** | **J JA** | **61** | **0.53** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.91** | **J** | **61** | **0.60** | **pg/g** |
| 1,2,3,7,8,9-HxCDF | ND | | 61 | 0.68 | pg/g |
| **Total HxCDF** | **8.5** | | **61** | **0.61** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **5.5** | **J JA** | **61** | **0.96** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **1.5** | **J JA** | **61** | **1.2** | **pg/g** |
| **Total HpCDF** | **21** | | **61** | **1.0** | **pg/g** |
| **OCDF** | **27** | **J** | **120** | **1.7** | **pg/g** |

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 5ISC11**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C050192 - 011 | **Work Order #....:** | K73402A5 | **Matrix.....:** | SO |
| **Date Sampled....:** | 03/04/09 | **Date Received....:** | 03/05/09 | **Dilution Factor:** | 10 |
| **Prep Date....:** | 03/05/09 | **Analysis Date....:** | 03/10/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9064370 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.27 g | **Analyst ID....:** | Sylvia H. Krenn | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 91 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 71 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 111 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 77 | 40 - 135 |
| 13C-OCDD | 62 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 90 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 73 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 107 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 85 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

JA The analyte was positively identified, but the quantitation is an estimate.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Explosives
Test America Laboratories, Inc., SDG G9C050192

**DATE:** May 4, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on March 04, 2009. Solid samples were analyzed for explosives using USEPA SW-846 8330B. A total of twenty-one solid samples (seven diluted sample included) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC01 | G9C050192-001 | 51SC10 | G9C050192-010 |
| 51SC02 | G9C050192-002 | 51SC10 | G9C050192-010DL |
| 51SC02 | G9C050192-002DL | 51SC11 | G9C050192-011 |
| 51SC03 | G9C050192-003 | 51SC11 | G9C050192-011DL |
| 51SC04 | G9C050192-004 | 51SC12 | G9C050192-012 |
| 51SC05 | G9C050192-005 | 51SC12 | G9C050192-012DL |
| 51SC06 | G9C050192-006 | 51SC13 | G9C050192-013 |
| 51SC07 | G9C050192-007 | 51SC13 | G9C050192-013DL |
| 51SC08 | G9C050192-008 | 51SC14 | G9C050192-014 |
| 51SC08 | G9C050192-008DL | 51SC14 | G9C050192-014DL |
| 51SC09 | G9C050192-009 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| X | | System Monitoring Compounds |
| | X | Laboratory Control Sample |
| | X | Matrix Spike/Spike Duplicate |
| X | | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. Target compound 2,4,6-trinitrotoluene exceeded the calibration range for samples 51SC02 (G9C050192-002), 51SC08 (G9C050192-008), 51SC10 (G9C050192-010), 51SC11 (G9C050192-011), 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014). Target compound 2,4-dinitrotoluene exceeded the calibration range for samples 51SC08 (G9C050192-008), 51SC10 (G9C050192-010), 51SC11 (G9C050192-011), 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014). Target compound 2,6-dinitrotoluene exceeded the calibration range for samples 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014). Target compounds 2-nitrotoluene and 4-nitrotoluene exceeded the calibration range for samples 51SC14 (G9C050192-014). These data points were qualified rejected "R" for data usability. The second diluted run data reported should be used only for these compounds meeting this condition. There were no impacts to the data completeness.

Eric Malarek, Chemist

5/8/09
Date

**RFAAP VALIDATION REPORT**
**EXPLOSIVES REVIEW**
**SDG G9C050192**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, explosive compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/04/09, the coolers were received by the primary laboratory (Test America) on 03/05/09 at 4.0°C, 3.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 03/04/09. For the solid samples, the samples for explosive were extracted on 03/06/09 and 03/10/09. The samples were analyzed on 03/07/09, 03/08/09, 03/09/09, 03/10/09, and 03/11/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**
The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. No contaminants should be present in the blanks. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5x) the maximum amount for explosive target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 03/07/09 | G9C060000-254 | All target explosives <½MRL | NA | NA | None |
| 03/11/09 | G9C100000-440 | All target explosives <½MRL | NA | NA | None |

MRL = Method Reporting Limit
NA = Not Applicable

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5-point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. The DoD QSM specifies that the correlation coefficient must be ≥0.995 and/or the percent relative standard deviation (%RSD) must be ≤20%. All detects were qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For the explosives initial calibration performed on 09/27/08 on instrument LC10.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC02 (G9C050192-002), 51SC02 (G9C050192-002DL), 51SC03 (G9C050192-003), 51SC04 (G9C050192-004), 51SC05 (G9C050192-005), 51SC06 (G9C050192-006), 51SC07 (G9C050192-007), 51SC08 (G9C050192-008), 51SC08 (G9C050192-008DL), 51SC09 (G9C050192-009), 51SC10 (G9C050192-010), 51SC10 (G9C050192-010DL), 51SC11 (G9C050192-011), 51SC11 (G9C050192-011DL), 51SC12 (G9C050192-012), 51SC12 (G9C050192-012DL), 51SC13 (G9C050192-013), 51SC13 (G9C050192-013DL), 51SC14 (G9C050192-014), and 51SC14 (G9C050192-014DL) apply to this initial calibration.

- For the explosives initial calibration performed on 09/26/08 on instrument LC9.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Confirmations for samples 51SC01 (G9C050192-001), 51SC02 (G9C050192-002), 51SC02 (G9C050192-002DL), 51SC03 (G9C050192-003), 51SC04 (G9C050192-004), 51SC05 (G9C050192-005), 51SC06 (G9C050192-006), 51SC07 (G9C050192-007), 51SC08 (G9C050192-008), 51SC08 (G9C050192-008DL), 51SC09 (G9C050192-009), 51SC10 (G9C050192-010), 51SC10 (G9C050192-010DL), 51SC11 (G9C050192-011), 51SC11 (G9C050192-011DL), 51SC12 (G9C050192-012), 51SC12 (G9C050192-012DL), 51SC13 (G9C050192-013), 51SC13 (G9C050192-013DL), 51SC14 (G9C050192-014), and 51SC14 (G9C050192-014DL) apply to this initial calibration.

**IV-Continuing Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. Continuing calibration standards are analyzed after every 10 injections, and at the end of the analysis sequence. The DoD QSM specifies that the percent difference (%D) from initial calibration should be no greater than ±20%. All detects were qualified as estimated "J" for where there were exceeding %Ds, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For explosives initial calibration verification performed on 09/27/08 @21:28 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this initial verification calibration.

- For explosives continuing calibration performed on 03/07/09 @14:42 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC02 (G9C050192-002), 51SC03 (G9C050192-003), 51SC04 (G9C050192-004), and 51SC05 (G9C050192-005) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/07/09 @23:07 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC06 (G9C050192-006), 51SC07 (G9C050192-007), 51SC08 (G9C050192-008), 51SC09 (G9C050192-009), 51SC10 (G9C050192-010), 51SC11 (G9C050192-011), 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/08/09 @07:31 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 03/09/09 @17:46 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC02 (G9C050192-002DL) and 51SC08 (G9C050192-008DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/10/09 @00:31 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC10 (G9C050192-010DL), 51SC11 (G9C050192-011DL), 51SC12 (G9C050192-012DL), 51SC13 (G9C050192-013DL), and 51SC14 (G9C050192-014DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/10/09 @05:35 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 03/10/09 @13:31 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 03/10/09 @15:12 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 03/11/09 @13:29 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 03/11/09 @21:05 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives initial calibration verification performed on 09/27/08 @14:26 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported or confirmations apply to this initial verification calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 03/07/09 @15:16 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC01 (G9C050192-001), 51SC02 (G9C050192-002), 51SC03 (G9C050192-003), 51SC04 (G9C050192-004), 51SC05 (G9C050192-005) 51SC06 (G9C050192-006), and 51SC07 (G9C050192-007) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/08/09 @00:36 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC08 (G9C050192-008), 51SC09 (G9C050192-009), 51SC10 (G9C050192-010), 51SC11 (G9C050192-011), 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/10/09 @13:39 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmation for 51SC14 (G9C050192-014DL) applies to this continuing calibration.

- For explosives continuing calibration performed on 03/10/09 @15:44 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported or confirmations apply to this continuing calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 03/09/09 @18:46 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC02 (G9C050192-002DL) and 51SC08 (G9C050192-008DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/10/09 @01:00 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC10 (G9C050192-010DL), 51SC11 (G9C050192-011DL), 51SC12 (G9C050192-012DL), 51SC13 (G9C050192-013DL), and 51SC14 (G9C050192-014DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/10/09 @07:14 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported or confirmations apply to this continuing calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 03/11/09 @13:29 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC01 (G9C050192-001), 51SC05 (G9C050192-005), and 51SC06 (G9C050192-006) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/11/09 @21:05 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported or confirmations apply to this continuing calibration; therefore, no qualifiers were applied.

**V-System Monitoring Compound (Surrogates)**
Laboratory performance on individual samples is established by means of spiking activities. The percent recovery (%R) for all samples and blanks must be within the laboratory control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria: 3,4-dinitrotoluene (81-127%)

- For sample 51SC08 (G9C050192-008), the surrogate 3,4-dinitrotoluene (208%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC08 (G9C050192-008DL), the surrogate 3,4-dinitrotoluene (209%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC10 (G9C050192-010DL), the surrogate 3,4-dinitrotoluene (226%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC11 (G9C050192-011), the surrogate 3,4-dinitrotoluene (185%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC11 (G9C050192-011DL), the surrogate 3,4-dinitrotoluene (179%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC12 (G9C050192-012), the surrogate 3,4-dinitrotoluene (524%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC12 (G9C050192-012DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For sample 51SC13 (G9C050192-013), the surrogate 3,4-dinitrotoluene (1400%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC13 (G9C050192-013DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For sample 51SC14 (G9C050192-014), the surrogate 3,4-dinitrotoluene (3480%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC14 (G9C050192-014DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For all other samples, all criteria were met.

**VI-Laboratory Control Sample**

Laboratory control samples (LCS) are used to monitor long-term accuracy of the analytical method. The analysis is performed at a frequency of 1 per analytical batch. The percent recoveries (%Rs) must be within the laboratory control limits. DoD QSM solid LCS recovery limits are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9C060000-254 was used as solid LCS for explosives analyzed on 03/07/09. All criteria were met. No qualifiers were applied. Samples 51SC02 (G9C050192-002), 51SC02 (G9C050192-002DL), 51SC03 (G9C050192-003), 51SC04 (G9C050192-004), 51SC07 (G9C050192-007), 51SC08 (G9C050192-008), 51SC08 (G9C050192-008DL), 51SC09 (G9C050192-009), 51SC10 (G9C050192-010), 51SC10 (G9C050192-010DL), 51SC11 (G9C050192-011), 51SC11 (G9C050192-011DL), 51SC12 (G9C050192-012), 51SC12 (G9C050192-012DL), 51SC13 (G9C050192-013), 51SC13 (G9C050192-013DL), 51SC14 (G9C050192-014), and 51SC14 (G9C050192-014DL) apply to this LCS.

- Sample G9C100000-440 was used as solid LCS for explosives analyzed on 03/11/09. All criteria were met. No qualifiers were applied. Samples 51SC01 (G9C050192-001), 51SC05 (G9C050192-005), and 51SC06 (G9C050192-006) apply to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the laboratory control limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 51SC01 (G9C050192-001) was used as the solid MS/MSD for the explosive analysis on 03/11/09. Target compounds 2,4,6-trinitrotoluene (163%) and nitroglycerin (113%) were above criteria limits. For all other target compounds, all criteria were met. The associated LCS sample (see Section VI) was within criteria. The sample concentration was >4 times the spike added for 2,4,6-trinitrotoluene; therefore, no qualifiers were applied based upon this outlier. For nitroglycerin, the spiked sample was non-detect; therefore, no qualifiers were applied based upon the high recovery. Samples 51SC01 (G9C050192-001), 51SC02 (G9C050192-002), 51SC02 (G9C050192-002DL), 51SC03 (G9C050192-003), 51SC04 (G9C050192-004), 51SC05 (G9C050192-005), 51SC06 (G9C050192-006), 51SC07 (G9C050192-007), 51SC08 (G9C050192-008), 51SC08 (G9C050192-008DL), 51SC09 (G9C050192-009), 51SC10 (G9C050192-010), 51SC10 (G9C050192-010DL), 51SC11 (G9C050192-011), 51SC11 (G9C050192-011DL), 51SC12 (G9C050192-012), 51SC12 (G9C050192-012DL), 51SC13 (G9C050192-013), 51SC13 (G9C050192-013DL), 51SC14 (G9C050192-014), and 51SC14 (G9C050192-014DL) apply to this MS/MSD.

**VIII-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- Field soil sample duplicate pair 51SC01 (G9C050192-001) and 51SC01D (G9C110192-013) was collected for select explosives. All detected explosives found in the sample and its duplicate pair and associated %RPD are noted in **Table 3**. For where the concentrations exceeded the calibration range, the diluted sample value was used. All other explosive target compounds were non-detect. 2,4-Dinitrotoluene (164%), 2,6-dinitrotoluene (151%), and 2,4,6-trinitrotoluene (128%) exceeded criteria and were qualified estimated "J" based upon the high RPDs. 2-Nitrotoluene was qualified estimated "J" for detects and "UJ" for non-detects based upon the original sample found to be non-detect and the duplicate pair detected above the method reporting limit.

**Table 3 Field Precision Hits Analysis Summary for Explosives for Duplicate Pair 51SC01 (G9C050192-001) and 51SC01D (G9C110192-013)**

| Compound | Original Sample (mg/kg) | Duplicate Pair (mg/kg) | %RPD |
|---|---|---|---|
| 2,4-Dinitrotoluene | 0.17J | 1.7 | 164 |
| 2,6-Dinitrotoluene | 0.11J | 0.78 | 151 |
| 2,4,6-Trinitrotoluene | 2.1 | 9.5 | 128 |
| 2-Nitrotoluene | 0.25U | 0.52 | NA |
| 4-Nitrotoluene | 0.50U | 0.45J | NA |

J = Estimated value <MRL and >MDL. Data point qualified was estimated "J".
U = Non-detect value as <MRL.
NA = Not Applicable.

- Field soil sample duplicate pair 51SC07 (G9C050192-007) and 51SC07D (G9C110192-014) was collected for select explosives. All detected explosives found in the sample and its duplicate pair and associated %RPD are noted in **Table 4**. For where the concentrations exceeded the calibration range, the diluted sample value was used. All other explosive target compounds were non-detect. 2,4-Dinitrotoluene (187%), 2,6-dinitrotoluene (169%), and 2,4,6-trinitrotoluene (187%) exceeded criteria and were qualified estimated "J" based upon the high RPDs. 2-Nitrotoluene and 4-nitrotoluene were qualified estimated "J" for detects and "UJ" for non-detects based upon the original sample found to be non-detect and the duplicate pair detected above the method reporting limit.

**Table 4 Field Precision Hits Analysis Summary for Explosives for Duplicate Pair 51SC07 (G9C050192-007) and 51SC07D (G9C110192-014)**

| Compound | Original Sample (mg/kg) | Duplicate Pair (mg/kg) | %RPD |
|---|---|---|---|
| 2,4-Dinitrotoluene | 0.10J | 3.0 | 187 |
| 2,6-Dinitrotoluene | 0.072J | 0.86 | 169 |
| 2,4,6-Trinitrotoluene | 0.30 | 8.9 | 187 |
| 2-Nitrotoluene | 0.25U | 0.46 | NA |
| 4-Nitrotoluene | 0.50U | 0.56 | NA |

J = Estimated value <MRL and >MDL. Data point qualified was estimated "J".
U = Non-detect value as <MRL.
NA = Not Applicable.

**IX-Quantitation Verification**

The accuracy of analytical results was verified through the calculation of several parameters. The calculation was based calibration factors. The absolute percent difference (%D) between the calculated and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns.

- All values >MDL and <MRL or <3*MDL (whichever was greater) were qualified as estimated "J".

- Target compound 2,4,6-trinitrotoluene exceeded the calibration range for samples 51SC02 (G9C050192-002), 51SC08 (G9C050192-008), 51SC10 (G9C050192-010), 51SC11 (G9C050192-011), 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014). Target compound 2,4-dinitrotoluene exceeded the calibration range for samples 51SC08 (G9C050192-008), 51SC10 (G9C050192-010), 51SC11 (G9C050192-011), 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014). Target compound 2,6-dinitrotoluene exceeded the calibration range for samples 51SC12 (G9C050192-012), 51SC13 (G9C050192-013), and 51SC14 (G9C050192-014). Target compounds 2-nitrotoluene and 4-nitrotoluene exceeded the calibration range for samples 51SC14 (G9C050192-014). These data points were qualified rejected "R" for data usability. The second diluted run data reported should be used only for these compounds meeting this condition. There were no impacts to the data completeness.

- For samples 51SC12 (G9C050192-012) and 51SC13 (G9C050192-013), 1,3-dinitrobenzene was outside confirmation criteria and was qualified estimated "J" for the associated samples. For all other explosive confirmations, all criteria were met.

**Sample: 51SC01 (G9C050192-001), 2,4,6-trinitrotoluene**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Vt = Volume of total extract (mL).
CF = Average relative calibration factor for compound being measured (from ICAL)
W(s) = Weight of sample in kilograms.
D = Percent dry weight (100 - % moisture in sample)/100 (Air dried =1.00)
DF = Dilution factor

Conc. µg/kg = (23712 * 80 * 1) / (89.04988 * 10.01 * 1.00) = 2128 µg/kg = 2.1 mg/kg
Reported Value = 2.1 mg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO1**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-001 | **Work Order #...:** | K73302A6 | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/10/09 | **Analysis Date..:** | 03/11/09 | | |
| **Prep Batch #...:** | 9069440 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 18 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.17 J** J | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.11 J** J | **1.2** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND VJ | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| **2,4,6-Trinitrotoluene** | **2.1** J | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 103 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC02**

**HPLC**

| | | |
|---|---|---|
| **Lot-Sample #...:** G9C050192-002 | **Work Order #...:** K734A1AA | **Matrix.....:** SO |
| **Date Sampled...:** 03/04/09 | **Date Received..:** 03/05/09 | |
| **Prep Date.....:** 03/06/09 | **Analysis Date..:** 03/07/09 | |
| **Prep Batch #...:** 9065254 | | |
| **Dilution Factor:** 1 | | |
| **% Moisture.....:** 17 | **Method.....:** SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **4.2** | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.88 J** J | **1.2** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.21 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.25 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **9.1 E** R | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 112 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO2**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-002 | **Work Order #...:** | K734A2AA | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/09/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 2 | | | | |
| **% Moisture.....:** | 17 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND R | 0.50 | mg/kg | 0.0084 |
| **2,4-Dinitrotoluene** | **4.3 R** | **0.50** | **mg/kg** | **0.011** |
| **2,6-Dinitrotoluene** | **0.90 J R** | **2.5** | **mg/kg** | **0.015** |
| Nitroglycerin | ND R | 1.0 | mg/kg | 0.030 |
| **2-Nitrotoluene** | **0.22 J R** | **0.50** | **mg/kg** | **0.026** |
| **4-Nitrotoluene** | **0.25 J R** | **1.0** | **mg/kg** | **0.036** |
| **2,4,6-Trinitrotoluene** | **9.2** | **0.50** | **mg/kg** | **0.039** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 94 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO3**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-003 | **Work Order #...:** | K734J1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/07/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 19 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **1.3** | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.39 J** J | **1.2** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.098 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.11 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **3.6** | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 86 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC04**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-004 | **Work Order #...:** | K734L1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/07/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 18 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.85** | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.28 J J** | **1.2** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.14 J J** | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.11 J J** | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **3.0** | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 93 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC05**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-005 | **Work Order #...:** | K734M2AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/10/09 | **Analysis Date..:** | 03/11/09 | | |
| **Prep Batch #...:** | 9069440 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 16 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.048 J** J | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.025 J** J | **1.2** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.064 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.044 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **0.13 J** J | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 99 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISCO6**

**HPLC**

| | | |
|---|---|---|
| **Lot-Sample #...:** G9C050192-006 | **Work Order #...:** K734N2AG | **Matrix.....:** SO |
| **Date Sampled...:** 03/04/09 | **Date Received..:** 03/05/09 | |
| **Prep Date.....:** 03/10/09 | **Analysis Date..:** 03/11/09 | |
| **Prep Batch #...:** 9069440 | | |
| **Dilution Factor:** 0.99 | | |
| **% Moisture.....:** 8.7 | **Method.....:** SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.025 J** J | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.044 J** J | **1.2** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| **2,4,6-Trinitrotoluene** | **0.38** | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 101 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC07**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-007 | **Work Order #...:** | K734R1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/08/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 13 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.10 J** J | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.072 J** J | **1.2** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND UJ | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND UJ | 0.50 | mg/kg | 0.018 |
| **2,4,6-Trinitrotoluene** | **0.30** J | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 97 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC08**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-008 | **Work Order #...:** | K734V1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/08/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 21 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **30 E** R | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **3.4** K | **1.2** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.63** K | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.49 J** K | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **20 E** R | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 208 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC08**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-008 | **Work Order #...:** | K734V2AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/09/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 4.99 | | | | |
| **% Moisture.....:** | 21 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |
| **2,4-Dinitrotoluene** | **31 K** | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **3.4 J R** | **6.2** | **mg/kg** | **0.036** |
| Nitroglycerin | ND R | 2.5 | mg/kg | 0.075 |
| **2-Nitrotoluene** | **0.65 J R** | **1.2** | **mg/kg** | **0.065** |
| **4-Nitrotoluene** | **0.51 J R** | **2.5** | **mg/kg** | **0.091** |
| **2,4,6-Trinitrotoluene** | **21 K** | **1.2** | **mg/kg** | **0.097** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 209 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC09**

**HPLC**

| | | |
|---|---|---|
| **Lot-Sample #...:** G9C050192-009 | **Work Order #...:** K734W1AG | **Matrix.....:** SO |
| **Date Sampled...:** 03/04/09 | **Date Received..:** 03/05/09 | |
| **Prep Date.....:** 03/06/09 | **Analysis Date..:** 03/08/09 | |
| **Prep Batch #...:** 9065254 | | |
| **Dilution Factor:** 1 | | |
| **% Moisture.....:** 25 | **Method.....:** SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.64** | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.26 J** J | **1.2** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.27** | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.21 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **1.4** | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 84 | (81 - 127) |

**NOTE(S):**

J` Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC10**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-010 | **Work Order #...:** | K734X1AH | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/08/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 20 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **19 E R** | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **5.0 K** | **1.2** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **1.4 K** | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **1.6 K** | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **26 E R** | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 223 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC10**

**HPLC**

| | | |
|---|---|---|
| **Lot-Sample #...:** G9C050192-010 | **Work Order #...:** K734X2AH | **Matrix.....:** SO |
| **Date Sampled...:** 03/04/09 | **Date Received..:** 03/05/09 | |
| **Prep Date.....:** 03/06/09 | **Analysis Date..:** 03/10/09 | |
| **Prep Batch #...:** 9065254 | | |
| **Dilution Factor:** 4.99 | | |
| **% Moisture.....:** 20 | **Method.....:** SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |
| **2,4-Dinitrotoluene** | **20 K** | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **5.1 J R** | **6.2** | **mg/kg** | **0.036** |
| Nitroglycerin | ND R | 2.5 | mg/kg | 0.075 |
| **2-Nitrotoluene** | **1.5 R** | **1.2** | **mg/kg** | **0.065** |
| **4-Nitrotoluene** | **1.7 J R** | **2.5** | **mg/kg** | **0.091** |
| **2,4,6-Trinitrotoluene** | **27 K** | **1.2** | **mg/kg** | **0.097** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 226 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC11**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-011 | **Work Order #...:** | K73401AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/08/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 20 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **4.3** K | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **2.0** K | **1.2** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.63** K | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.65** K | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **11 E** R | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 185 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC11**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-011 | **Work Order #...:** | K73402AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/10/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 1.99 | | | | |
| **% Moisture.....:** | 20 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND R | 0.50 | mg/kg | 0.0084 |
| **2,4-Dinitrotoluene** | **4.4 R** | **0.50** | **mg/kg** | **0.011** |
| **2,6-Dinitrotoluene** | **2.1 J R** | **2.5** | **mg/kg** | **0.015** |
| Nitroglycerin | ND R | 1.0 | mg/kg | 0.030 |
| **2-Nitrotoluene** | **0.66 R** | **0.50** | **mg/kg** | **0.026** |
| **4-Nitrotoluene** | **0.67 J R** | **1.0** | **mg/kg** | **0.036** |
| **2,4,6-Trinitrotoluene** | **11 K** | **0.50** | **mg/kg** | **0.039** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 179 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC12**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-012 | **Work Order #...:** | K73441AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/08/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 9.2 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **1,3-Dinitrobenzene** | **0.034 J,PG** J | **0.25** | **mg/kg** | **0.0042** |
| **2,4-Dinitrotoluene** | **30 E** R | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **13 E** R | **1.2** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **4.6** K | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **4.8** K | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **72 E** R | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 524 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC12**

**HPLC**

| | | |
|---|---|---|
| **Lot-Sample #...:** G9C050192-012 | **Work Order #...:** K73442AG | **Matrix.....:** SO |
| **Date Sampled...:** 03/04/09 | **Date Received..:** 03/05/09 | |
| **Prep Date.....:** 03/06/09 | **Analysis Date..:** 03/10/09 | |
| **Prep Batch #...:** 9065254 | | |
| **Dilution Factor:** 20 | | |
| **% Moisture.....:** 9.2 | **Method.....:** SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND R | 5.0 | mg/kg | 0.084 |
| **2,4-Dinitrotoluene** | **29** | **5.0** | **mg/kg** | **0.11** |
| **2,6-Dinitrotoluene** | **12 J** J | **25** | **mg/kg** | **0.15** |
| Nitroglycerin | ND R | 10 | mg/kg | 0.30 |
| **2-Nitrotoluene** | **4.6 J** R | **5.0** | **mg/kg** | **0.26** |
| **4-Nitrotoluene** | **4.6 J** R | **10** | **mg/kg** | **0.36** |
| **2,4,6-Trinitrotoluene** | **71** | **5.0** | **mg/kg** | **0.39** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC13**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-013 | **Work Order #...:** | K73471AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/08/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 18 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **1,3-Dinitrobenzene** | **0.066 J,PG** J | **0.25** | **mg/kg** | **0.0042** |
| **2,4-Dinitrotoluene** | **43 E** R | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **33 E** R | **1.2** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **6.9** K | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **5.5** K | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **200 E** R | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 1400 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

E Estimated result. Result concentration exceeds the calibration range.

# Form 1 Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC13**

**HPLC**

| | | |
|---|---|---|
| **Lot-Sample #...:** G9C050192-013 | **Work Order #...:** K73472AG | **Matrix.....:** SO |
| **Date Sampled...:** 03/04/09 | **Date Received..:** 03/05/09 | |
| **Prep Date.....:** 03/06/09 | **Analysis Date..:** 03/10/09 | |
| **Prep Batch #...:** 9065254 | | |
| **Dilution Factor:** 50 | | |
| **% Moisture.....:** 18 | **Method.....:** SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND R | 12 | mg/kg | 0.21 |
| **2,4-Dinitrotoluene** | **45** | **12** | **mg/kg** | **0.26** |
| **2,6-Dinitrotoluene** | **34 J** J | **62** | **mg/kg** | **0.36** |
| Nitroglycerin | ND R | 25 | mg/kg | 0.75 |
| **2-Nitrotoluene** | **13** R | **12** | **mg/kg** | **0.65** |
| **4-Nitrotoluene** | **5.5 J** R | **25** | **mg/kg** | **0.91** |
| **2,4,6-Trinitrotoluene** | **230** | **12** | **mg/kg** | **0.97** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC14**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C050192-014 | **Work Order #...:** | K735A1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/04/09 | **Date Received..:** | 03/05/09 | | |
| **Prep Date.....:** | 03/06/09 | **Analysis Date..:** | 03/08/09 | | |
| **Prep Batch #...:** | 9065254 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 20 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **1,3-Dinitrobenzene** | **0.30** K | **0.25** | **mg/kg** | **0.0042** |
| **2,4-Dinitrotoluene** | **250 E** R | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **130 E** R | **1.2** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **120 E** R | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **95 E** R | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **240 E** R | **0.25** | **mg/kg** | **0.019** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 3480 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 5ISC14**

**HPLC**

**Lot-Sample #...:** G9C050192-014 **Work Order #...:** K735A2AG **Matrix.....:** SO
**Date Sampled...:** 03/04/09 **Date Received..:** 03/05/09
**Prep Date.....:** 03/06/09 **Analysis Date..:** 03/10/09
**Prep Batch #...:** 9065254
**Dilution Factor:** 99.5
**% Moisture.....:** 20 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,3-Dinitrobenzene | ND R | 25 | mg/kg | 0.42 |
| **2,4-Dinitrotoluene** | **480** | **25** | **mg/kg** | **0.53** |
| **2,6-Dinitrotoluene** | **140** | **120** | **mg/kg** | **0.73** |
| Nitroglycerin | ND R | 50 | mg/kg | 1.5 |
| **2-Nitrotoluene** | **120** | **25** | **mg/kg** | **1.3** |
| **4-Nitrotoluene** | **95** | **50** | **mg/kg** | **1.8** |
| **2,4,6-Trinitrotoluene** | **500** | **25** | **mg/kg** | **1.9** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
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410-612-6350
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Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Aluminum and Lead
Test America Laboratories, Inc., SDG G9C110192

**DATE:** May 6, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on March 10, 2009. Solid samples were analyzed for aluminum and lead using USEPA SW-846 3050B/6010B for ICP metals. A total of fifteen solid samples (includes three duplicates) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC15 | G9C110192-001 | 51SC24 | G9C110192-010 |
| 51SC16 | G9C110192-002 | 51SC25 | G9C110192-011 |
| 51SC17 | G9C110192-003 | 51SC26 | G9C110192-012 |
| 51SC18 | G9C110192-004 | 51SC01D | G9C110192-013 |
| 51SC19 | G9C110192-005 | 51SC07D | G9C110192-014 |
| 51SC20 | G9C110192-006 | 51SC16D | G9C110192-015 |
| 51SC21 | G9C110192-007 | 51SC22 | G9C110192-016 |
| 51SC23 | G9C110192-009 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Blank Analysis |
| | X | ICP Interference Check Sample (ICS) |
| | X | Laboratory Control Sample (LCS) |
| | X | Laboratory Sample Duplicate |
| X | | Matrix Spike and Spike Duplicate |
| | X | ICP Serial Dilution |
| X | | Field Sample Duplicate |
| | X | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

5/6/09

Date

**RFAAP VALIDATION REPORT**
**METALS REVIEW**
**SDG G9C110192**

## I-Holding Times and Preservation

The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: For solid matrices, the samples are shipped at ambient temperature for ICP metals (cool @4°C±2°C if with other tests) with a maximum holding time is 180 days.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/10/09, the coolers were received on by the primary laboratory (Test America) on 03/11/09 at 5.0°C, 5.0°C, and 5.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 03/10/09 for metals analysis. For solid samples, the soil samples were digested on 03/12/09 and analyzed on 03/12/09 for ICP metals. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Initial and Continuing Calibration

Requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

ICP: 1- blank (DoD QSM <½ MRL)
3 – standards ($r \geq 0.995$)
ICV/CCV (90-110%) (DoD QSM 90-110%)
MRL (70-130%) (DoD QSM 80-120%)
High Std. (95-105%)

- The solid samples were analyzed for ICP metals on 03/12/09. All ICV/CCV/High Standard/MRL criteria were met for aluminum and lead for all runs. No qualifiers were applied.

## III-Blanks

Blanks (preparation and calibration blanks) are assessed to determine the existence and magnitude of contamination problems. No contaminants should be detected (i.e. <MDL) in any of the associated blanks. DoD QSM limits are <½MRL for the method blank and <2*MDL for the calibration blanks. Samples are qualified "B" when they are less than 5x the absolute value of the maximum blank concentration. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10 for ICP) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | Analysis | QC Blank ID | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 03/12/09 | ICP Al & Pb | ICB/CCBs | <2*MDL | NA | None |
| 03/12/09 | ICP Al & Pb | G9C110000-338 | <1/2*MRL | NA | None |

NA = Not Applicable
MDL = Method Detection Limit.
MRL = Method Reporting Limit.

**IV-ICP Interference Check Sample (ICS)**
The ICP interference check sample (ICS) verifies interelement and background correction factors. ICP Interference Check is performed at the beginning and end of each sample analysis run. Control limits are 80-120% (DoD QSM limits 80-120%).

- All criteria were met. No qualifiers were applied.

**V-Laboratory Control Samples (LCS)**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All aqueous LCS results must fall within the control limits. The DoD QSM solid LCS recovery limits are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9C110000-338 was used as solid LCS for ICP metals analysis on 03/12/09. All criteria were met. No qualifiers were applied. Samples 51SC15 (G9C110192-001), 51SC16 (G9C110192-002), 51SC17 (G9C110192-003), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), 51SC21 (G9C110192-007), 51SC23 (G9C110192-009), 51SC24 (G9C110192-010), 51SC25 (G9C110192-011), 51SC26 (G9C110192-012), 51SC01D (G9C110192-013), 51SC07D (G9C110192-014), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016) apply to this LCS.

**VI-Laboratory Duplicate Sample Analysis**
Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits. DoD QSM limits for metals are 20% RPD for ICP metals.

- No laboratory duplicate was analyzed. Laboratory precision was evaluated using the Matrix Spike and Matrix Spike Duplicate (Section VII).

**VII-Matrix Spike/Spike Duplicate**
MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Specific criteria include the analyses of matrix spike and matrix spike duplicate samples at a frequency of one MS and MSD per 20 samples of similar matrix. MS and MSD recoveries and relative percent differences between MS and MSD recoveries should be within the specified limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used. Post digestion spikes limits are 75-125% for ICP metals.

- Sample 51SC22 (G9C110192-016) was used as solid laboratory MS/MSD for ICP metals analysis on 03/12/09. Aluminum (2990%, 2670%) and lead (66%, 153%; RPD=47%) were outside criteria. All other recoveries and RPD values were within criteria. The associated LCS (Section V) was within criteria. The sample concentration was >4 times the spike added for aluminum; therefore, no qualifiers were applied based upon this outlier. Lead was detected in all samples. Lead was qualified estimated "J" for all associated samples based upon the variable recoveries and high RPD. Samples 51SC15 (G9C110192-001), 51SC16 (G9C110192-002), 51SC17 (G9C110192-003), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), 51SC21 (G9C110192-007), 51SC23 (G9C110192-009), 51SC24 (G9C110192-010), 51SC25 (G9C110192-011), 51SC26 (G9C110192-012), 51SC01D (G9C110192-013), 51SC07D (G9C110192-014), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016) apply to this MS/MSD.

**VIII-ICP Serial Dilution**
An ICP serial dilution is performed to determine whether significant physical or chemical interferences exist due to sample matrix at high concentrations. An analysis of a 5-fold dilution should agree within 10% difference of the original result when the concentration in sample is a factor of 50 above MDL.

- The serial dilution for ICP metals was analyzed on 03/12/09 using solid sample 51SC22 (G9C110192-016). All criteria were met for aluminum and lead. No qualifiers were applied. Samples 51SC15 (G9C110192-001), 51SC16 (G9C110192-002), 51SC17 (G9C110192-003), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), 51SC21 (G9C110192-007), 51SC23 (G9C110192-009), 51SC24 (G9C110192-010), 51SC25 (G9C110192-011), 51SC26 (G9C110192-012), 51SC01D (G9C110192-013), 51SC07D (G9C110192-014), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016) apply to this serial dilution.

**IX-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 35% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- Field soil sample duplicate pair 51SC01 (G9C050192-001) and 51SC01D (G9C110192-013) was collected for aluminum and lead. Aluminum was detected in the original sample at 17200 mg/kg and the field duplicate pair at 32100 mg/kg resulting in a RPD of 60.5%. Lead was detected in the original sample at 10.8 mg/kg and the field duplicate pair at 20.4 mg/kg resulting in a RPD of 61.5%. The duplicate pair was qualified estimated "J" for aluminum and lead based upon the high RPDs.

- Field soil sample duplicate pair 51SC07 (G9C050192-007) and 51SC07D (G9C110192-014) was collected for aluminum and lead. Aluminum was detected in the original sample at 20100 mg/kg and the field duplicate pair at 25300 mg/kg resulting in a RPD of 22.9%. Lead was detected in the original sample at 12.5 mg/kg and the field duplicate pair at 10.8 mg/kg resulting in a RPD of 14.6%. All criteria were met. No qualifiers were applied.

- Field soil sample duplicate pair 51SC16 (G9C110192-002) and 51SC16D (G9C110192-015) was collected for aluminum and lead. Aluminum was detected in the original sample at 16900 mg/kg and the field duplicate pair at 17700 mg/kg resulting in a RPD of 4.6%. Lead was detected in the original sample at 46.5 mg/kg and the field duplicate pair at 55.4 mg/kg resulting in a RPD of 17.5%. All criteria were met. No qualifiers were applied.

**X-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification.

**Sample: 51SC15 (G9C110192-001), Lead**
Conc. (mg/kg) = {(conc. μg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(136.79 μg/L)*(0.100 L)*(1)} / {(0.99 g)*(0.8012)} = 17.25 μg/g = 17.3 mg/kg

Reported concentration = 17.2 mg/kg
%D = 0.6%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC15

TOTAL Metals

Lot-Sample #...: G9C110192-001
Date Sampled...: 03/10/09 Date Received..: 03/11/09 Matrix.....: SO
% Moisture.....: 20

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 29600 | 26.2 | mg/kg | SW846 6010B | 03/12/09 | K8C0V1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.7 | | |
| Lead | 17.2 J | 2.5 | mg/kg | SW846 6010B | 03/12/09 | K8C0V1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.75 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC16

TOTAL Metals

Lot-Sample #...: G9C110192-002
Date Sampled...: 03/10/09 Date Received..: 03/11/09 Matrix.....: SO
% Moisture.....: 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 16900 | 25.2 | mg/kg | SW846 6010B | 03/12/09 | K8C081AA |
| | | Dilution Factor: 1 | | MDL.....: 8.4 | | |
| Lead | 46.5 J | 2.4 | mg/kg | SW846 6010B | 03/12/09 | K8C081AC |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC17

TOTAL Metals

Lot-Sample #...: G9C110192-003
Date Sampled...: 03/10/09 Date Received..: 03/11/09 Matrix.....: SO
% Moisture.....: 12

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 14900 | 23.7 | mg/kg | SW846 6010B | 03/12/09 | K8C091AA |
| | | Dilution Factor: 1 | | MDL.....: 7.9 | | |
| Lead | 11.8 J | 2.3 | mg/kg | SW846 6010B | 03/12/09 | K8C091AC |
| | | Dilution Factor: 1 | | MDL.....: 0.68 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC18

TOTAL Metals

Lot-Sample #...: G9C110192-004
Date Sampled...: 03/10/09 Date Received..: 03/11/09 Matrix.....: SO
% Moisture.....: 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 28400 | 25.9 | mg/kg | SW846 6010B | 03/12/09 | K8C1C1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| Lead | 13.9 J | 2.5 | mg/kg | SW846 6010B | 03/12/09 | K8C1C1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC19

TOTAL Metals

Lot-Sample #...: G9C110192-005
Date Sampled...: 03/10/09 Date Received..: 03/11/09 Matrix.....: SO
% Moisture.....: 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 19200 | 25.8 | mg/kg | SW846 6010B | 03/12/09 | K8C1E1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| Lead | 12.8 J | 2.5 | mg/kg | SW846 6010B | 03/12/09 | K8C1E1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: S1SC20

TOTAL Metals

Lot-Sample #...: G9C110192-006
Date Sampled...: 03/10/09 Date Received..: 03/11/09 Matrix.....: SO
% Moisture.....: 23

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 21300 | 27.2 | mg/kg | SW846 6010B | 03/12/09 | K8C1F1AA |
| | | Dilution Factor: 1 | | MDL.....: 9.1 | | |
| Lead | 335 J | 2.6 | mg/kg | SW846 6010B | 03/12/09 | K8C1F1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.78 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC21

TOTAL Metals

Lot-Sample #...: G9C110192-007
Date Sampled...: 03/10/09 Date Received..: 03/11/09 Matrix.....: SO
% Moisture.....: 20

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 19000 | 26.1 | mg/kg | SW846 6010B | 03/12/09 | K8C1H1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.7 | | |
| Lead | 37.9 J | 2.5 | mg/kg | SW846 6010B | 03/12/09 | K8C1H1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.75 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC23

TOTAL Metals

Lot-Sample #...: G9C110192-009
Date Sampled...: 03/10/09 Date Received..: 03/11/09
% Moisture.....: 19 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 18600 | 25.8 | mg/kg | SW846 6010B | 03/12/09 | K8C3F1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| Lead | 45.8 J | 2.5 | mg/kg | SW846 6010B | 03/12/09 | K8C3F1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC24

TOTAL Metals

Lot-Sample #...: G9C110192-010 Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
% Moisture.....: 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 32700 | 26.0 | mg/kg | SW846 6010B | 03/12/09 | K8C3K1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.7 | | |
| Lead | 22.8 J | 2.5 | mg/kg | SW846 6010B | 03/12/09 | K8C3K1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC25

TOTAL Metals

Lot-Sample #...: G9C110192-011
Date Sampled...: 03/10/09 Date Received..: 03/11/09
% Moisture.....: 15
Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 24600 | 24.8 | mg/kg | SW846 6010B | 03/12/09 | K8C3L1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.3 | | |
| Lead | 14.6 J | 2.4 | mg/kg | SW846 6010B | 03/12/09 | K8C3L1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.71 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC26

TOTAL Metals

Lot-Sample #...: G9C110192-012 Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
% Moisture.....: 15

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 18300 | 24.6 | mg/kg | SW846 6010B | 03/12/09 | K8C3N1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.2 | | |
| Lead | 10.4 J | 2.3 | mg/kg | SW846 6010B | 03/12/09 | K8C3N1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.70 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC01D

TOTAL Metals

Lot-Sample #...: G9C110192-013 Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
% Moisture.....: 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 32100 J | 25.9 | mg/kg | SW846 6010B | 03/12/09 | K8C3Q1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| Lead | 20.4 J | 2.5 | mg/kg | SW846 6010B | 03/12/09 | K8C3Q1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC07D

TOTAL Metals

Lot-Sample #...: G9C110192-014
Date Sampled...: 03/10/09 Date Received..: 03/11/09 Matrix.....: SO
% Moisture.....: 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 25300 | 25.6 | mg/kg | SW846 6010B | 03/12/09 | K8C3T1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| Lead | 10.8 J | 2.4 | mg/kg | SW846 6010B | 03/12/09 | K8C3T1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC16D

TOTAL Metals

Lot-Sample #...: G9C110192-015 Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
% Moisture.....: 16

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 17700 | 25.1 | mg/kg | SW846 6010B | 03/12/09 | K8C3W1AA |
| | | Dilution Factor: 1 | | MDL.....: 8.4 | | |
| Lead | 55.4 J | 2.4 | mg/kg | SW846 6010B | 03/12/09 | K8C3W1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC22

TOTAL Metals

Lot-Sample #...: G9C110192-016 Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
% Moisture.....: 16

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9070338 | | | | | | |
| Aluminum | 17300 | 25.1 | mg/kg | SW846 6010B | 03/12/09 | K8C301AA |
| | | Dilution Factor: 1 | | MDL.....: 8.4 | | |
| Lead | 49.6 J | 2.4 | mg/kg | SW846 6010B | 03/12/09 | K8C301AC |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Dioxin Furans
Test America Laboratories, Inc., SDG G9C110192

**DATE:** May 7, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on March 10, 2009. The samples were analyzed for Dioxin Furan compounds using USEPA SW-846 Method 8290 High Resolution Gas Chromatography/High Resolution Mass Spectroscopy (HRGC/HRMS). A total of two soil samples (one diluted sample included) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC21 | G9C110192-007 | 51SC21 | G9C110192-007DL |

Data were reviewed and validated using a combination of project QAPP, *DOD Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *USEPA Region III Dioxin/Furan Data Validation Guidance* (March, 1999). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Internal Standards (IS) Recovery Standard Solutions |
| | X | Cleanup Standards |
| | X | Laboratory Control Standard or Ongoing Precision Result (OPR) |
| | X | Matrix Spike and Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. For where the target compound OCDD exceeded the calibration range for sample 51SC21 (G9C110192-007), the data point was qualified rejected "R" for data usability. The second diluted run data reported should be used only for the compounds meeting this condition. There were no impacts to the data completeness.

Eric Malarek, Chemist

5/7/09
Date

**RFAAP VALIDATION REPORT**
**DIOXIN FURAN REVIEW**
**SDG G9C110192**

## I-Holding Times and Preservation

The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, dioxin and furans are shipped cooled (@4°C ± 2°C) with a maximum holding time of 30 days from sample collection to preparative extraction and 45 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/10/09, the coolers were received on by the primary laboratory (Test America) on 03/11/09 at 5.0°C, 5.0°C, and 5.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: For the soil samples collected 03/10/09, the dioxins and furans were extracted on 03/11/09 and analyzed on 03/13/09 and 03/16/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Blank Analysis

The purpose of laboratory (or field) blank analyses is to determine the existence and magnitude of contamination problems resulting from field and laboratory activities. No contamination should be found in any of the blanks >EDL (estimated detection limit). The DoD QSM criteria specifies all concentrations should be less than ½ MRL (<MRL for common laboratory contaminants OCDD and OCDF) and <2*EDL for the calibration blanks. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants OCDD or OCDF, or 5 times (5X) the maximum amount for other target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 100) if needed. The soil samples were sampled with directly into the sample jars from the excavator bucket; therefore, no rinse blank applies to these samples.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. pg/g | Action Level pg/g | B qualified samples |
|---|---|---|---|---|---|
| 03/13/09 | G9C110000-290B | 1,2,3,7,8,9-HxCDD | 0.043J | 0.22 | None |
| 03/13/09 | G9C110000-290B | Total HxCDD | 0.043 | 0.22 | None |
| 03/13/09 | G9C110000-290B | 1,2,3,4,6,7,8-HpCDD | 0.086J | 0.43 | None |
| 03/13/09 | G9C110000-290B | Total HpCDD | 0.20 | 1.0 | None |
| 03/13/09 | G9C110000-290B | OCDD | 0.31J | 3.1 | None |
| 03/13/09 | G9C110000-290B | OCDF | 0.055J | 0.55 | None |

J = Estimated value >EDL and <MRL.

**III-Instrument Performance Check**
Instrument must be tuned with perfluorokerosene (PFK) to achieve a static resolving power of at least 10,000 (10% valley) and lock-mass ion between lowest and highest masses for each descriptor and level of reference compound ≤10%. Documentation of the mass spectrometer resolving power is accomplished by recording the peak profile of the high-mass reference signal (typically m/z 330.9792) obtained during a peak examination by using the low-mass PFK ion at m/z 292.9825 or lower in mass as reference. At the beginning of the each 12-hour period, the chromatographic resolution is verified in the same fashion as in the initial calibration through the analysis of HRCC solution on the DB-5 (or equivalent) column or through the analysis of the column performance solution on the SP-2331 or SP-225 (or equivalent) column. A 25% valley must be achieved between the close eluters.

- All PFK forms were verified and found to be in compliance with method specification. No qualifiers were applied.

**IV-Initial Calibration**
Once the window defining mix has been analyzed and the descriptor switching times have been verified, the five point calibration solutions can be analyzed prior to sample analysis. Per method and DoD QSM, the initial calibration criteria are as follows:

  - The percent relative standard deviations for the mean response factors RRF(n) from the 17 unlabeled standards must not exceed ±20%, and those for the labeled reference compounds must not exceed ±30%;
  - The signal to noise ratio ≥10% for all target ions;
  - Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For initial calibration performed on 02/11/09 for all target compounds on instrument 4D5, all criteria were met. No qualifiers were applied. Samples 51SC21 (G9C110192-007) and 51SC21 (G9C110192-007DL) apply to this initial calibration.

- For TCDF and TCDD initial calibration performed on 03/09/09 for all target compounds on instrument 5D2, all criteria were met. No qualifiers were applied. Samples 51SC21 (G9C110192-007) and 51SC21 (G9C110192-007DL) apply to this initial calibration.

**V-Continuing Calibration**
The continuing calibration consists of two parts: evaluation of the mass resolution and retention time check. Per method and DoD QSM, the following stipulates the continuing calibration criteria.

  - The signal signal-to-noise ratio (S/N) must be at least 10:1 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard for each analyte.
  - The relative response factor of each analyte for the unlabeled standard must be within ±20% of the average RF obtained from the initial calibration, and the RRF of each labeled standard must be within ±30% of the average RRF established during initial calibration. This is expressed in term of percent difference %D.
  - Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For continuing calibration performed on 03/13/09 @17:18 on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 51SC21 (G9C110192-007) applies to this continuing calibration.

- For continuing calibration performed on 03/13/09 @23:54 on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 51SC21 (G9C110192-007) applies to this continuing calibration.

- For continuing calibration performed on 03/16/09 @14:38 on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 51SC21 (G9C110192-007DL) applies to this continuing calibration.

- For continuing calibration performed on 03/16/09 @20:28 on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 51SC21 (G9C110192-007DL) applies to this continuing calibration.

- For TCDF and TCDD continuing calibration performed on 03/16/09 @11:33 on instrument 5D2, all criteria were met. No qualifiers were applied. Samples 51SC21 (G9C110192-007) and 51SC21 (G9C110192-007DL) apply to this continuing calibration.

- For TCDF and TCDD continuing calibration performed on 03/16/09 @14:54 on instrument 5D2, all criteria were met. No qualifiers were applied. Samples 51SC21 (G9C110192-007) and 51SC21 (G9C110192-007DL) apply to this continuing calibration.

**VI-Internal Standards (IS) Recovery Standard Solutions**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Specific criteria include: Recoveries of the isotopically-labeled recovery standards to fall within the 40 to 135 percent range for the tetra- through octachlorinated congeners, or as stated in the data package (DoD QSM limits 40-135%).

- All criteria were met. No qualifiers were applied.

**VII-Cleanup Standards**
Cleanup standards are added to every sample, blank, quality control sample, and calibration solution. This compound is added to the samples after extraction but prior to cleanup and is used to verify the percent recovery obtained using the isotope dilution technique. The control limits are 40 to 135 percent (DoD QSM limits 40-135%).

- All criteria were met. No qualifiers were applied.

**VIII-Laboratory Control Standard (LCS) or Ongoing Precision Result (OPR)**
LCSs are used to monitor laboratory accuracy and precision by calculating the percent recoveries of the spiked compounds. Per DOD QSM and method criteria, acceptable performance is determined by:

1. Recoveries of the isotopically-labeled extraction standards to fall within 40-135% control limits for the tetra- through octachlorinated congeners, or as stated in the data package;

2. Recoveries (accuracy) of the unlabeled compounds should be within $\pm$35% when spiked at the method quantitation limit and within $\pm$30% when spiked above 20 times the method quantitation limit, or as stated in the data package;

3. When duplicate OPR are required, the relative percent difference (RPD) of the unlabeled analytes concentrations should be within 30% when spiked at the method quantitation limit and within $\pm$20% when spiked above 20 times the method quantitation limit.

- Sample G9C110000-290 was used as LCS and LCSD on 03/13/09 analytical run. All criteria were met. No qualifiers were applied. Samples 51SC21 (G9C110192-007) and 51SC21 (G9C110192-007DL) apply to this LCS.

**IX-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. Per DoD QSM, MS/MSD recoveries must be within in-house laboratory limits (75-125%) and RPD ≤20%.

- No project specific soil matrix MS/MSD was performed in this SDG; therefore, it was not evaluated.

**X-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid matrix samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific aqueous field duplicate was performed in this SDG; therefore, it was not evaluated.

**XI-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification. Any value reported by the laboratory as estimated based on an analyte to internal standard ratio below the calibration curve was qualified as estimated "J". The signal signal-to-noise ratio (S/N) must be greater than 2.5 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard. Any detected value with ether interference was qualified as estimated "J". For where the ion ratio failed the 25% criteria (JA-lab flag), the estimated maximum possible concentration (EMPC) was reported and flagged estimated "J". For where presence of quantitation interference, the date was flagged estimated "J" for detects and "UJ" for non-detects.

- For sample 51SC21 (G9C110192-007), target compound OCDD exceeded the calibration range (E-lab flag), the data point was qualified rejected "R" for data usability. The second diluted run data reported should be used only for the compounds meeting this condition. There were no impacts to the data completeness.

**Sample: 51SC21 (G9C110192-007DL), OCDD**

A(x) = sum of the integrated ion abundances of the quantitation ions for the unlabeled ions;

A(is) = sum of the integrated ion abundances of the quantitation ions for the labeled ions;

Q(is) = quantity, in pg, of the internal standard added to the sample before extraction; Here need to multiply concentration (pg/uL) by final extract volume (uL).

W = weight, in g, of the sample (solid or organic liquid) as dry weight, or volume in mL of an aqueous sample; and

Avg. RRF(n) = calculated mean relative response factor for the unlabeled analyte.

$$\text{Conc. (ng/kg)} = \frac{(A(x))*Q(is)}{A(is) * W * \text{Avg. RRF}} = \frac{(422501000)*4.0*1000}{(31978700) * (10.02 * 0.8012) * 1.115} =$$

= 5904 ng/kg = 5900 pg/g

Reported Value = 5900 pg/g
% Difference = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% RPD for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitaion limit may be inaccurate or imprecise. |
| N | Tenative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identificaition questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitaion limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from USEPA Region III Dioxin/Furan Data Validation Guidance (March, 1999) and Region III Modifications to the National Functional Guidelines for Organic Data Review (September 1994).

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 51SC21**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C110192 - 007 | **Work Order #....:** | K8C1H1AF | **Matrix....:** | SO |
| **Date Sampled....:** | 03/10/09 | **Date Received....:** | 03/11/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/11/09 | **Analysis Date....:** | 03/13/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9070290 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.16 | pg/g |
| **Total TCDD** | **0.14** | | 1.2 | **0.042** | **pg/g** |
| 1,2,3,7,8-PeCDD | ND | | 6.2 | 0.20 | pg/g |
| **Total PeCDD** | **0.26** | | 6.2 | **0.14** | **pg/g** |
| 1,2,3,4,7,8-HxCDD | ND | | 6.2 | 0.66 | pg/g |
| **1,2,3,6,7,8-HxCDD** | **1.6** | **J** J | 6.2 | **0.073** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **1.4** | **J B** J | 6.2 | **0.072** | **pg/g** |
| **Total HxCDD** | **9.7** | | 6.2 | **0.078** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **61** | **B** | 6.2 | **0.24** | **pg/g** |
| **Total HpCDD** | **110** | | 6.2 | **0.24** | **pg/g** |
| **OCDD** | **5800** | **E B** R | 12 | **0.11** | **pg/g** |
| **2,3,7,8-TCDF** | **2.2** | **CON** | 1.2 | **0.26** | **pg/g** |
| **Total TCDF** | **8.2** | | 1.2 | **0.047** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.49** | **J** J | 6.2 | **0.027** | **pg/g** |
| **2,3.4,7,8-PeCDF** | **1.3** | **J** J | 6.2 | **0.029** | **pg/g** |
| **Total PeCDF** | **6.1** | | 6.2 | **0.027** | **pg/g** |
| **1,2.3,4,7,8-HxCDF** | **1.6** | **J** J | 6.2 | **0.044** | **pg/g** |
| **1,2.3,6,7,8-HxCDF** | **0.51** | **J** J | 6.2 | **0.035** | **pg/g** |
| **2,3.4,6,7,8-HxCDF** | **0.61** | **J** J | 6.2 | **0.039** | **pg/g** |
| **1,2.3,7,8,9-HxCDF** | **0.23** | **J** J | 6.2 | **0.045** | **pg/g** |
| **Total HxCDF** | **12** | | 6.2 | **0.040** | **pg/g** |
| **1,2.3,4,6,7,8-HpCDF** | **10** | | 6.2 | **0.10** | **pg/g** |
| **1,2.3,4,7,8,9-HpCDF** | **0.77** | **J** J | 6.2 | **0.12** | **pg/g** |
| **Total HpCDF** | **29** | | 6.2 | **0.11** | **pg/g** |
| **OCDF** | **28** | **B** | 12 | **0.11** | **pg/g** |

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 51SC21**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C110192 - 007 | **Work Order #....:** | K8C1H1AF | **Matrix....:** | SO |
| **Date Sampled....:** | 03/10/09 | **Date Received....:** | 03/11/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/11/09 | **Analysis Date....:** | 03/13/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9070290 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 88 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 94 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 81 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 100 | 40 - 135 |
| 13C-OCDD | 107 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 81 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 84 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 100 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 90 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjustec for dry weight

| | |
|---|---|
| B | Method blank contamination. The associated method blank contains the target analyte at a reportable level |
| CON | Confirmation analysis |
| E | Estimated result Result concentration exceeds the calibration range |
| J | Estimated Result |

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# Form I Copy

Shaw E & I Inc

Sample ID: 51SC21

Trace Level Organic Compounds

SW846 8290

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C110192 - 007 | **Work Order #....:** | K8C1H2AF | **Matrix....:** | SO |
| **Date Sampled....:** | 03/10/09 | **Date Received....:** | 03/11/09 | **Dilution Factor:** | 10 |
| **Prep Date....:** | 03/11/09 | **Analysis Date....:** | 03/16/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9070290 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | R | 12 | 0.30 | pg/g |
| Total TCDD | ND | | 12 | 0.30 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 62 | 0.51 | pg/g |
| Total PeCDD | ND | | 62 | 0.51 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 62 | 0.25 | pg/g |
| **1,2,3,6,7,8-HxCDD** | **2.1** | **J** | **62** | **0.20** | **pg/g** |
| 1,2,3,7,8,9-HxCDD | ND | | 62 | 1.4 | pg/g |
| **Total HxCDD** | **5.5** | | **62** | **0.21** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **66** | **B** | **62** | **1.1** | **pg/g** |
| **Total HpCDD** | **120** | | **62** | **1.1** | **pg/g** |
| **OCDD** | **5900** | **B** | **120** | **3.4** | **pg/g** |
| **Total TCDF** | **6.8** | R | **12** | **0.20** | **pg/g** |
| 1,2,3,7,8-PeCDF | ND | | 62 | 0.35 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 62 | 0.92 | pg/g |
| **Total PeCDF** | **2.3** | | **62** | **0.36** | **pg/g** |
| 1,2,3,4,7,8-HxCDF | ND | | 62 | 1.5 | pg/g |
| **1,2,3,6,7,8-HxCDF** | **0.71** | **J** | **62** | **0.21** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.95** | **J** | **62** | **0.24** | **pg/g** |
| 1,2,3,7,8,9-HxCDF | ND | | 62 | 0.26 | pg/g |
| **Total HxCDF** | **11** | | **62** | **0.24** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **10** | **J** | **62** | **0.30** | **pg/g** |
| 1,2,3,4,7,8,9-HpCDF | ND | | 62 | 0.68 | pg/g |
| **Total HpCDF** | **27** | | **62** | **0.32** | **pg/g** |
| **OCDF** | **31** | **J B** | **120** | **0.26** | **pg/g** |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 85 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 84 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 88 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 93 | 40 - 135 |
| 13C-OCDD | 92 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 80 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 77 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 102 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 90 | 40 - 135 |

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# Form I Copy

**Shaw E & I Inc**

**Sample ID: 51SC21**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | C9C110192 - 007 | **Work Order #....:** | K8C1H2AF | **Matrix....:** | SO |
| **Date Sampled....:** | 03/10/09 | **Date Received....:** | 03/11/09 | **Dilution Factor:** | 10 |
| **Prep Date....:** | 03/11/09 | **Analysis Date....:** | 03/16/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9070290 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID....:** | Grandfield S. Virginia | | |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level

J Estimated Result

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Explosives
Test America Laboratories, Inc., SDG G9C110192

**DATE:** May 8, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on March 10, 2009. Solid samples were analyzed for explosives using USEPA SW-846 8330B. A total of twenty-five solid samples (ten diluted sample included) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC15 | G9C110192-001 | 51SC23 | G9C110192-009DL |
| 51SC16 | G9C110192-002 | 51SC24 | G9C110192-010 |
| 51SC16 | G9C110192-002DL | 51SC25 | G9C110192-011 |
| 51SC17 | G9C110192-003 | 51SC26 | G9C110192-012 |
| 51SC18 | G9C110192-004 | 51SC01D | G9C110192-013 |
| 51SC18 | G9C110192-004DL | 51SC01D | G9C110192-013DL |
| 51SC19 | G9C110192-005 | 51SC07D | G9C110192-014 |
| 51SC19 | G9C110192-005DL | 51SC07D | G9C110192-014DL |
| 51SC20 | G9C110192-006 | 51SC16D | G9C110192-015 |
| 51SC20 | G9C110192-006DL | 51SC16D | G9C110192-015DL |
| 51SC21 | G9C110192-007 | 51SC22 | G9C110192-016 |
| 51SC21 | G9C110192-007DL | 51SC22 | G9C110192-016DL |
| 51SC23 | G9C110192-009 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| X | | System Monitoring Compounds |
| | X | Laboratory Control Sample |
| | X | Matrix Spike/Spike Duplicate |
| X | | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. Target compound 2,4,6-trinitrotoluene exceeded the calibration range for samples 51SC16 (G9C110192-002), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), 51SC21 (G9C110192-007), 51SC23 (G9C110192-009), 51SC01D (G9C110192-013), 51SC07D (G9C110192-014), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016). Target compound 2,4-dinitrotoluene exceeded the calibration range for samples 51SC16 (G9C110192-002), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), 51SC21 (G9C110192-007), 51SC23 (G9C110192-009), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016). Target compounds 2,6-dinitrotoluene, 2-nitrotoluene, and 4-nitrotoluene exceeded the calibration range for samples 51SC16 (G9C110192-002), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), 51SC21 (G9C110192-007), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016). Target compound nitroglycerin exceeded the calibration range for samples 51SC23 (G9C110192-009). These data points were qualified rejected "R" for data usability. The second diluted run data reported should be used only for these compounds meeting this condition. There were no impacts to the data completeness.

Eric Malarek, Chemist

5/8/09
Date

**RFAAP VALIDATION REPORT**
**EXPLOSIVES REVIEW**
**SDG G9C110192**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, explosive compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/10/09, the coolers were received on by the primary laboratory (Test America) on 03/11/09 at 5.0°C, 5.0°C, and 5.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 03/10/09. For the solid samples, the samples for explosive were extracted on 03/12/09. The samples were analyzed on 03/13/09 and 03/14/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**
The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. No contaminants should be present in the blanks. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5x) the maximum amount for explosive target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 03/13/09 | G9C170000-404 | All target explosives <½MRL | NA | NA | None |

MRL = Method Reporting Limit
NA = Not Applicable

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5-point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. The DoD QSM specifies that the correlation coefficient must be ≥0.995 and/or the percent relative standard deviation (%RSD) must be ≤20%. All detects were qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For the explosives initial calibration performed on 09/27/08 on instrument LC10.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Samples 51SC15 (G9C110192-001), 51SC16 (G9C110192-002), 51SC16 (G9C110192-002DL), 51SC17 (G9C110192-003), 51SC18 (G9C110192-004), 51SC18 (G9C110192-004DL), 51SC19 (G9C110192-005), 51SC19 (G9C110192-005DL), 51SC20 (G9C110192-006), 51SC20 (G9C110192-006DL), 51SC21 (G9C110192-007), 51SC21 (G9C110192-007DL), 51SC23 (G9C110192-009), 51SC23 (G9C110192-009DL), 51SC24 (G9C110192-010), 51SC25 (G9C110192-011), 51SC26 (G9C110192-012), 51SC01D (G9C110192-013), 51SC01D (G9C110192-013DL), 51SC07D (G9C110192-014), 51SC07D (G9C110192-014DL), 51SC16D (G9C110192-015), 51SC16D (G9C110192-015DL), 51SC22 (G9C110192-016), and 51SC22 (G9C110192-016DL) apply to this initial calibration.

- For the explosives initial calibration performed on 09/26/08 on instrument LC9.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Confirmations for samples 51SC15 (G9C110192-001), 51SC16 (G9C110192-002), 51SC16 (G9C110192-002DL), 51SC17 (G9C110192-003), 51SC18 (G9C110192-004), 51SC18 (G9C110192-004DL), 51SC19 (G9C110192-005), 51SC19 (G9C110192-005DL), 51SC20 (G9C110192-006), 51SC20 (G9C110192-006DL), 51SC21 (G9C110192-007), 51SC21 (G9C110192-007DL), 51SC23 (G9C110192-009), 51SC23 (G9C110192-009DL), 51SC24 (G9C110192-010), 51SC25 (G9C110192-011), 51SC26 (G9C110192-012), 51SC01D (G9C110192-013), 51SC01D (G9C110192-013DL), 51SC07D (G9C110192-014), 51SC07D (G9C110192-014DL), 51SC16D (G9C110192-015), 51SC16D (G9C110192-015DL), 51SC22 (G9C110192-016), and 51SC22 (G9C110192-016DL) apply to this initial calibration.

**IV-Continuing Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. Continuing calibration standards are analyzed after every 10 injections, and at the end of the analysis sequence. The DoD QSM specifies that the percent difference (%D) from initial calibration should be no greater than ±20%. All detects were qualified as estimated "J" for where there were exceeding %Ds, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For explosives initial calibration verification performed on 09/27/08 @21:28 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this initial verification calibration.

- For explosives continuing calibration performed on 03/13/09 @13:10 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC15 (G9C110192-001), 51SC16 (G9C110192-002), 51SC17 (G9C110192-003), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), and 51SC21 (G9C110192-007) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/13/09 @21:36 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC23 (G9C110192-009), 51SC24 (G9C110192-010), 51SC25 (G9C110192-011), 51SC26 (G9C110192-012), 51SC01D (G9C110192-013), 51SC07D (G9C110192-014), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/14/09 @06:53 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 03/14/09 @12:15 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC16 (G9C110192-002DL), 51SC18 (G9C110192-004DL), 51SC19 (G9C110192-005DL), 51SC20 (G9C110192-006DL), and 51SC21 (G9C110192-007DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/14/09 @18:08 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC23 (G9C110192-009DL), 51SC01D (G9C110192-013DL), 51SC07D (G9C110192-014DL), 51SC16D (G9C110192-015DL) and 51SC22 (G9C110192-016DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/15/09 @00:52 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives initial calibration verification performed on 09/27/08 @14:26 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported or confirmations apply to this initial verification calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 03/13/09 @13:22 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC15 (G9C110192-001), 51SC16 (G9C110192-002), 51SC17 (G9C110192-003), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), and 51SC21 (G9C110192-007) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/13/09 @22:46 on instrument LC9.i, 4-nitrotoluene (-100%) and 2,4,6-trinitrotoluene (22%) were outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC23 (G9C110192-009), 51SC24 (G9C110192-010), 51SC25 (G9C110192-011), 51SC26 (G9C110192-012), 51SC01D (G9C110192-013), 51SC07D (G9C110192-014), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/14/09 @08:10 on instrument LC9.i, 4-nitrotoluene (-100%) and 2,4,6-trinitrotoluene (26%) were outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. No soil samples reported or confirmations apply to this continuing calibration.

- For explosives continuing calibration performed on 03/14/09 @12:28 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmation for 51SC16 (G9C110192-002DL), 51SC18 (G9C110192-004DL), 51SC19 (G9C110192-005DL), 51SC20 (G9C110192-006DL), and 51SC21 (G9C110192-007DL) applies to this continuing calibration.

- For explosives continuing calibration performed on 03/14/09 @19:47 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC23 (G9C110192-009DL), 51SC01D (G9C110192-013DL), 51SC07D (G9C110192-014DL), 51SC16D (G9C110192-015DL) and 51SC22 (G9C110192-016DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/15/09 @02:04 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. No soil samples reported or confirmations apply to this continuing calibration.

**V-System Monitoring Compound (Surrogates)**
Laboratory performance on individual samples is established by means of spiking activities. The percent recovery (%R) for all samples and blanks must be within the laboratory control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria: 3,4-dinitrotoluene (81-127%)

- For sample 51SC16 (G9C110192-002), the surrogate 3,4-dinitrotoluene (5410%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC16 (G9C110192-002DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For sample 51SC17 (G9C110192-003), the surrogate 3,4-dinitrotoluene (132%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC18 (G9C110192-004), the surrogate 3,4-dinitrotoluene (3440%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC18 (G9C110192-004DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For sample 51SC19 (G9C110192-005), the surrogate 3,4-dinitrotoluene (5320%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC19 (G9C110192-005DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For sample 51SC20 (G9C110192-006), the surrogate 3,4-dinitrotoluene (4960%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC20 (G9C110192-006DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For sample 51SC23 (G9C110192-009), the surrogate 3,4-dinitrotoluene (370%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC23 (G9C110192-009DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For sample 51SC01D (G9C110192-013), the surrogate 3,4-dinitrotoluene (133%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC01D (G9C110192-013DL), the surrogate 3,4-dinitrotoluene (133%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC16D (G9C110192-015), the surrogate 3,4-dinitrotoluene (3610%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC16D (G9C110192-015DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For sample 51SC22 (G9C110192-016), the surrogate 3,4-dinitrotoluene (5450%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC22 (G9C110192-016DL), the surrogate 3,4-dinitrotoluene (0.0%) was outside criteria. The surrogate was diluted out; therefore, no qualifiers were applied based upon this outlier.

- For all other samples, all criteria were met.

**VI-Laboratory Control Sample**

Laboratory control samples (LCS) are used to monitor long-term accuracy of the analytical method. The analysis is performed at a frequency of 1 per analytical batch. The percent recoveries (%Rs) must be within the laboratory control limits. DoD QSM solid LCS recovery limits are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9C170000-404 was used as solid LCS for explosives analyzed on 03/13-14/09. All criteria were met. No qualifiers were applied. Samples 51SC15 (G9C110192-001), 51SC16 (G9C110192-002), 51SC16 (G9C110192-002DL), 51SC17 (G9C110192-003), 51SC18 (G9C110192-004), 51SC18 (G9C110192-004DL), 51SC19 (G9C110192-005), 51SC19 (G9C110192-005DL), 51SC20 (G9C110192-006), 51SC20 (G9C110192-006DL), 51SC21 (G9C110192-007), 51SC21 (G9C110192-007DL), 51SC23 (G9C110192-009), 51SC23 (G9C110192-009DL), 51SC24 (G9C110192-010), 51SC25 (G9C110192-011), 51SC26 (G9C110192-012), 51SC01D (G9C110192-013), 51SC01D (G9C110192-013DL), 51SC07D (G9C110192-014), 51SC07D (G9C110192-014DL), 51SC16D (G9C110192-015), 51SC16D (G9C110192-015DL), 51SC22 (G9C110192-016), and 51SC22 (G9C110192-016DL) apply to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the laboratory control limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 51SC22 (G9C110192-016) was used as the solid MS/MSD for the explosive analysis on 03/13-14/09. Due to high sample target compound concentrations (>500 times spike added) and required dilutions, the MS/MSD could not be calculated. Therefore, the MS/MSD could not be evaluated. The associated LCS sample (see Section VI) was within criteria. No qualifiers were applied. Samples 51SC15 (G9C110192-001), 51SC16 (G9C110192-002), 51SC16 (G9C110192-002DL), 51SC17 (G9C110192-003), 51SC18 (G9C110192-004), 51SC18 (G9C110192-004DL), 51SC19 (G9C110192-005), 51SC19 (G9C110192-005DL), 51SC20 (G9C110192-006), 51SC20 (G9C110192-006DL), 51SC21 (G9C110192-007), 51SC21 (G9C110192-007DL), 51SC23 (G9C110192-009), 51SC23 (G9C110192-009DL), 51SC24 (G9C110192-010), 51SC25 (G9C110192-011), 51SC26 (G9C110192-012), 51SC01D (G9C110192-013), 51SC01D (G9C110192-013DL), 51SC07D (G9C110192-014), 51SC07D (G9C110192-014DL), 51SC16D (G9C110192-015), 51SC16D (G9C110192-015DL), 51SC22 (G9C110192-016), and 51SC22 (G9C110192-016DL) apply to this MS/MSD.

**VIII-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- Field soil sample duplicate pair 51SC01 (G9C050192-001) and 51SC01D (G9C110192-013) was collected for select explosives. All detected explosives found in the sample and its duplicate pair and associated %RPD are noted in **Table 3**. For where the concentrations exceeded the calibration range, the diluted sample value was used. All other explosive target compounds were non-detect. 2,4-Dinitrotoluene (164%), 2,6-dinitrotoluene (151%), and 2,4,6-trinitrotoluene (128%) exceeded criteria and were qualified estimated "J" based upon the high RPDs. 2-Nitrotoluene was qualified estimated "J" for detects and "UJ" for non-detects based upon the original sample found to be non-detect and the duplicate pair detected above the method reporting limit.

**Table 3 Field Precision Hits Analysis Summary for Explosives for Duplicate Pair 51SC01 (G9C050192-001) and 51SC01D (G9C110192-013)**

| Compound | Original Sample (mg/kg) | Duplicate Pair (mg/kg) | %RPD |
|---|---|---|---|
| 2,4-Dinitrotoluene | 0.17J | 1.7 | 164 |
| 2,6-Dinitrotoluene | 0.11J | 0.78 | 151 |
| 2,4,6-Trinitrotoluene | 2.1 | 9.5 | 128 |
| 2-Nitrotoluene | 0.25U | 0.52 | NA |
| 4-Nitrotoluene | 0.50U | 0.45J | NA |

J = Estimated value <MRL and >MDL. Data point qualified was estimated "J".
U = Non-detect value as <MRL.
NA = Not Applicable.

- Field soil sample duplicate pair 51SC07 (G9C050192-007) and 51SC07D (G9C110192-014) was collected for select explosives. All detected explosives found in the sample and its duplicate pair and associated %RPD are noted in **Table 4**. For where the concentrations exceeded the calibration range, the diluted sample value was used. All other explosive target compounds were non-detect. 2,4-Dinitrotoluene (187%), 2,6-dinitrotoluene (169%), and 2,4,6-trinitrotoluene (187%) exceeded criteria and were qualified estimated "J" based upon the high RPDs. 2-Nitrotoluene and 4-nitrotoluene were qualified estimated "J" for detects and "UJ" for non-detects based upon the original sample found to be non-detect and the duplicate pair detected above the method reporting limit.

**Table 4 Field Precision Hits Analysis Summary for Explosives for Duplicate Pair 51SC07 (G9C050192-007) and 51SC07D (G9C110192-014)**

| Compound | Original Sample (mg/kg) | Duplicate Pair (mg/kg) | %RPD |
|---|---|---|---|
| 2,4-Dinitrotoluene | 0.10J | 3.0 | 187 |
| 2,6-Dinitrotoluene | 0.072J | 0.86 | 169 |
| 2,4,6-Trinitrotoluene | 0.30 | 8.9 | 187 |
| 2-Nitrotoluene | 0.25U | 0.46 | NA |
| 4-Nitrotoluene | 0.50U | 0.56 | NA |

J = Estimated value <MRL and >MDL. Data point qualified was estimated "J".
U = Non-detect value as <MRL.
NA = Not Applicable.

- Field soil sample duplicate pair 51SC16 (G9C110192-002) and 51SC16D (G9C110192-015) was collected for select explosives. All detected explosives found in the sample and its duplicate pair and associated %RPD are noted in **Table 5**. For where the concentrations exceeded the calibration range, the diluted sample value was used. All other explosive target compounds were non-detect. 1,3-Dinitrobenzene (61.7%), 2,4-dinitrotoluene (64.9%), 2,6-dinitrotoluene (56.4%), nitroglycerin (143%), 2,4,6-trinitrotoluene (73.4%), 2-nitrotoluene (56.4%), and 4-nitrotoluene (58.1%) exceeded criteria and were qualified estimated "J" based upon the high RPDs.

**Table 5 Field Precision Hits Analysis Summary for Explosives for Duplicate Pair 51SC16 (G9C110192-002) and 51SC16D (G9C110192-015)**

| Compound | Original Sample (mg/kg) | Duplicate Pair (mg/kg) | %RPD |
|---|---|---|---|
| 1,3-Dinitrobenzene | 0.53 | 0.28 | 61.7 |
| 2,4-Dinitrotoluene | 1000 | 510 | 64.9 |
| 2,6-Dinitrotoluene | 250 | 140 | 56.4 |
| Nitroglycerin | 0.20J | 1.2 | 143 |
| 2,4,6-Trinitrotoluene | 1900 | 880 | 73.4 |
| 2-Nitrotoluene | 250 | 140 | 56.4 |
| 4-Nitrotoluene | 200J | 110J | 58.1 |

J = Estimated value <MRL and >MDL. Data point qualified was estimated "J".

**IX-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The calculation was based calibration factors. The absolute percent difference (%D) between the calculated and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns.

- All values >MDL and <MRL or <3*MDL (whichever was greater) were qualified as estimated "J".

- Target compound 2,4,6-trinitrotoluene exceeded the calibration range for samples 51SC16 (G9C110192-002), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), 51SC21 (G9C110192-007), 51SC23 (G9C110192-009), 51SC01D (G9C110192-013), 51SC07D (G9C110192-014), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016). Target compound 2,4-dinitrotoluene exceeded the calibration range for samples 51SC16 (G9C110192-002), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), 51SC21 (G9C110192-007), 51SC23 (G9C110192-009), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016). Target compounds 2,6-dinitrotoluene, 2-nitrotoluene, and 4-nitrotoluene exceeded the calibration range for samples 51SC16 (G9C110192-002), 51SC18 (G9C110192-004), 51SC19 (G9C110192-005), 51SC20 (G9C110192-006), 51SC21 (G9C110192-007), 51SC16D (G9C110192-015), and 51SC22 (G9C110192-016). Target compound nitroglycerin exceeded the calibration range for samples 51SC23 (G9C110192-009). These data points were qualified rejected "R" for data usability. The second diluted run data reported should be used only for these compounds meeting this condition. There were no impacts to the data completeness.

- For samples 51SC23 (G9C110192-009) and 51SC23 (G9C110192-009DL), 2-nitrotoluene and 4-nitrotoluene were outside confirmation criteria and was qualified estimated "J" for the associated samples. For all other explosive confirmations, all criteria were met.

**Sample: 51SC15 (G9C110192-001), 2,4,6-trinitrotoluene**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Vt = Volume of total extract (mL).
CF = Average relative calibration factor for compound being measured (from ICAL)
W(s) = Weight of sample in kilograms.
D = Percent dry weight (100 - % moisture in sample)/100 (Air dried =1.00)
DF = Dilution factor

Conc. µg/kg = (556 * 80 * 1) / (89.04988 * 10.01 * 1.00) = 49.90 µg/kg = 0.050 mg/kg
Reported Value = 0.050 mg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC15

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-001 | Work Order #...: | K8C0V1AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/13/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 20 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.14 J J | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.10 J J | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.63 | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.42 J J | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.050 J J | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 101 | (81 - 127) |

NOTE(S):

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC16

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-002 | Work Order #...: | K8C081AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/13/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 17 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 260 E R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 230 E R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | 0.20 J J | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 240 E R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 200 E R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 250 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | 0.53 J | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 5410 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

E Estimated result Result concentration exceeds the calibration range.

J Estimated result Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC16

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-002 | Work Order #...: | K8C082AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 998 | | | | |
| % Moisture.....: | 17 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 1000 J | 250 | mg/kg | 5.3 |
| 2,6-Dinitrotoluene | 250 J | 250 | mg/kg | 7.3 |
| Nitroglycerin | ND R | 500 | mg/kg | 15 |
| 2-Nitrotoluene | 250 J | 250 | mg/kg | 13 |
| 4-Nitrotoluene | 200 J J | 500 | mg/kg | 18 |
| 2,4,6-Trinitrotoluene | 1900 J | 250 | mg/kg | 19 |
| 1,3-Dinitrobenzene | ND R | 250 | mg/kg | 4.2 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery

* Surrogate recovery is outside stated control limits

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC17

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-003 | Work Order #...: | K8C091AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/13/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 1 | | | | |
| % Moisture.....: | 12 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 4.8 K | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 1.1 K | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.60 K | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.79 K | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 4.2 K | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 132 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC18

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-004 | Work Order #...: | K8C1C1AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/13/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 19 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 260 E R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 120 E R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | 0.24 J J | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 70 E R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 74 E R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 250 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | 0.31 K | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 3440 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits

E Estimated result Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC18

HPLC

| | | |
|---|---|---|
| Lot-Sample #...: G9C110192-004 | Work Order #...: K8C1C2AD | Matrix.....: SO |
| Date Sampled...: 03/10/09 | Date Received..: 03/11/09 | |
| Prep Date.....: 03/12/09 | Analysis Date..: 03/14/09 | |
| Prep Batch #...: 9076404 | | |
| Dilution Factor: 499.5 | | |
| % Moisture.....: 19 | Method.....: SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 640 | 120 | mg/kg | 2.6 |
| 2,6-Dinitrotoluene | 130 | 120 | mg/kg | 3.6 |
| Nitroglycerin | ND R | 250 | mg/kg | 7.5 |
| 2-Nitrotoluene | 73 J J | 120 | mg/kg | 6.5 |
| 4-Nitrotoluene | 78 J J | 250 | mg/kg | 9.1 |
| 2,4,6-Trinitrotoluene | 1000 | 120 | mg/kg | 9.7 |
| 1,3-Dinitrobenzene | ND R | 120 | mg/kg | 2.1 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC19

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-005 | Work Order #...: | K8C1E1AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/13/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 1 | | | | |
| % Moisture.....: | 18 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 260 E R | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 190 E R | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | 1.1 K | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 160 E R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 110 E R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 250 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | 0.41 K | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 5320 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC19

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-005 | Work Order #...: | K8C1E2AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 500 | | | | |
| % Moisture.....: | 18 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 780 | 120 | mg/kg | 2.6 |
| 2,6-Dinitrotoluene | 220 | 120 | mg/kg | 3.6 |
| Nitroglycerin | ND R | 250 | mg/kg | 7.5 |
| 2-Nitrotoluene | 170 | 120 | mg/kg | 6.5 |
| 4-Nitrotoluene | 120 J J | 250 | mg/kg | 9.1 |
| 2,4,6-Trinitrotoluene | 1300 | 120 | mg/kg | 9.7 |
| 1,3-Dinitrobenzene | ND R | 120 | mg/kg | 2.1 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC20

HPLC

Lot-Sample #...: G9C110192-006 Work Order #...: K8C1F1AD Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
Prep Date.....: 03/12/09 Analysis Date..: 03/13/09
Prep Batch #...: 9076404
Dilution Factor: 0.99
% Moisture.....: 23 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 250 E R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 190 E R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | 1.5 K | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 130 E R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 100 E R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 240 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | 0.42 K | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 4960 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits

E Estimated result Result concentration exceeds the calibration range.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC20

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-006 | Work Order #...: | K8C1F2AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 498 | | | | |
| % Moisture.....: | 23 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 830 | 120 | mg/kg | 2.6 |
| 2,6-Dinitrotoluene | 220 | 120 | mg/kg | 3.6 |
| Nitroglycerin | ND R | 250 | mg/kg | 7.5 |
| 2-Nitrotoluene | 140 | 120 | mg/kg | 6.5 |
| 4-Nitrotoluene | 100 J J | 250 | mg/kg | 9.1 |
| 2,4,6-Trinitrotoluene | 1200 | 120 | mg/kg | 9.7 |
| 1,3-Dinitrobenzene | ND R | 120 | mg/kg | 2.1 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC21

HPLC

Lot-Sample #...: G9C110192-007 Work Order #...: K8C1H1AD Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
Prep Date.....: 03/12/09 Analysis Date..: 03/13/09
Prep Batch #...: 9076404
Dilution Factor: 0.99
% Moisture.....: 20 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 260 E R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 190 E R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | 0.54 K | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 230 E R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 160 E R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 250 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | 0.40 K | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 5200 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC21

HPLC

Lot-Sample #...: G9C110192-007 Work Order #...: K8C1H2AD Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
Prep Date.....: 03/12/09 Analysis Date..: 03/14/09
Prep Batch #...: 9076404
Dilution Factor: 498
% Moisture.....: 20 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 750 | 120 | mg/kg | 2.6 |
| 2,6-Dinitrotoluene | 210 | 120 | mg/kg | 3.6 |
| Nitroglycerin | ND R | 250 | mg/kg | 7.5 |
| 2-Nitrotoluene | 240 | 120 | mg/kg | 6.5 |
| 4-Nitrotoluene | 170 J J | 250 | mg/kg | 9.1 |
| 2,4,6-Trinitrotoluene | 990 | 120 | mg/kg | 9.7 |
| 1,3-Dinitrobenzene | ND R | 120 | mg/kg | 2.1 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC23

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-009 | Work Order #...: | K8C3F1AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/13/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 19 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 4-Nitrotoluene | 1.8 PG J | 0.50 | mg/kg | 0.018 |
| 2,4-Dinitrotoluene | 9.9 E R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 5.6 R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | 20 E R | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 2.6 PG J | 0.25 | mg/kg | 0.013 |
| 2,4,6-Trinitrotoluene | 69 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2,4-Dinitrotoluene | 370 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

PG The percent difference between the original and confirmation analyses is greater than 40%.

E Estimated result Result concentration exceeds the calibration range.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC23

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-009 | Work Order #...: | K8C3F3AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 9.99 | | | | |
| % Moisture.....: | 19 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 4-Nitrotoluene | 1.8 J,PG R | 5.0 | mg/kg | 0.18 |
| 2,4-Dinitrotoluene | 10 | 2.5 | mg/kg | 0.053 |
| 2,6-Dinitrotoluene | 5.7 R | 2.5 | mg/kg | 0.073 |
| Nitroglycerin | 20 | 5.0 | mg/kg | 0.15 |
| 2-Nitrotoluene | 2.5 PG R | 2.5 | mg/kg | 0.13 |
| 2,4,6-Trinitrotoluene | 70 | 2.5 | mg/kg | 0.19 |
| 1,3-Dinitrobenzene | ND R | 2.5 | mg/kg | 0.042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC24

HPLC

Lot-Sample #...: G9C110192-010 Work Order #...: K8C3K1AD Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
Prep Date.....: 03/12/09 Analysis Date..: 03/13/09
Prep Batch #...: 9076404
Dilution Factor: 0.99
% Moisture.....: 19 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.34 | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.21 J J | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 1.1 | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.78 | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 1.7 | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 104 | (81 - 127) |

NOTE(S):

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC25

HPLC

| | | |
|---|---|---|
| Lot-Sample #...: G9C110192-011 | Work Order #...: K8C3L1AD | Matrix.....: SO |
| Date Sampled...: 03/10/09 | Date Received..: 03/11/09 | |
| Prep Date.....: 03/12/09 | Analysis Date..: 03/14/09 | |
| Prep Batch #...: 9076404 | | |
| Dilution Factor: 0.99 | | |
| % Moisture.....: 15 | Method.....: SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.43 | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.20 J J | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 1.4 | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.89 | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.40 | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 103 | (81 - 127) |

NOTE(S):

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC26

HPLC

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C110192-012 | **Work Order #...:** | K8C3N1AD | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/10/09 | **Date Received..:** | 03/11/09 | | |
| **Prep Date.....:** | 03/12/09 | **Analysis Date..:** | 03/14/09 | | |
| **Prep Batch #...:** | 9076404 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 15 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **2.1** | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.69** | **0.25** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **1.2** | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.85** | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **1.6** | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 114 | (81 - 127) |

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC01D

HPLC

Lot-Sample #...: G9C110192-013 Work Order #...: K8C3Q1AD Matrix.....: SO
Date Sampled...: 03/10/09 Date Received..: 03/11/09
Prep Date.....: 03/12/09 Analysis Date..: 03/14/09
Prep Batch #...: 9076404
Dilution Factor: 1
% Moisture.....: 19 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 1.7 J | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 0.78 J | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.52 J | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.45 J K | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 9.4 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 133 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC01D

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-013 | Work Order #...: | K8C3Q3AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 5 | | | | |
| % Moisture.....: | 19 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 1.8 R | 1.2 | mg/kg | 0.026 |
| 2,6-Dinitrotoluene | 0.79 J R | 1.2 | mg/kg | 0.036 |
| Nitroglycerin | ND R | 2.5 | mg/kg | 0.075 |
| 2-Nitrotoluene | 0.52 J R | 1.2 | mg/kg | 0.065 |
| 4-Nitrotoluene | 0.46 J R | 2.5 | mg/kg | 0.091 |
| 2,4,6-Trinitrotoluene | 9.5 J | 1.2 | mg/kg | 0.097 |
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 133 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC07D

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-014 | Work Order #...: | K8C3T1AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 18 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 3.0 J | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.86 J | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.46 J | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.56 J | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 8.8 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 123 | (81 - 127) |

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC07D

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-014 | Work Order #...: | K8C3T3AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 4.97 | | | | |
| % Moisture.....: | 18 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 3.0 R | 1.2 | mg/kg | 0.026 |
| 2,6-Dinitrotoluene | 0.86 J R | 1.2 | mg/kg | 0.036 |
| Nitroglycerin | ND R | 2.5 | mg/kg | 0.075 |
| 2-Nitrotoluene | 0.47 J R | 1.2 | mg/kg | 0.065 |
| 4-Nitrotoluene | 0.58 J R | 2.5 | mg/kg | 0.090 |
| 2,4,6-Trinitrotoluene | 8.9 J | 1.2 | mg/kg | 0.096 |
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 117 | (81 - 127) |

NOTE(S):

J Estimated result Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC16D

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-015 | Work Order #...: | K8C3W1AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 16 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 260 E R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 130 E R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | 1.2 J | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 130 E R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 99 E R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 240 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | 0.28 J | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 3610 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC16D

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-015 | Work Order #...: | K8C3W3AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 498.5 | | | | |
| % Moisture.....: | 16 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 510 J | 120 | mg/kg | 2.6 |
| 2,6-Dinitrotoluene | 140 J | 120 | mg/kg | 3.6 |
| Nitroglycerin | ND R | 250 | mg/kg | 7.5 |
| 2-Nitrotoluene | 140 J | 120 | mg/kg | 6.5 |
| 4-Nitrotoluene | 110 J J | 250 | mg/kg | 9.1 |
| 2,4,6-Trinitrotoluene | 880 J | 120 | mg/kg | 9.7 |
| 1,3-Dinitrobenzene | ND R | 120 | mg/kg | 2.1 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery

* Surrogate recovery is outside stated control limits.

J Estimated result Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC22

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-016 | Work Order #...: | K8C302AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 16 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 250 E R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 220 E R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | 3.5 K | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 190 E R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 100 E R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 240 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | 0.44 K | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 5450 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC22

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9C110192-016 | Work Order #...: | K8C301AD | Matrix.....: | SO |
| Date Sampled...: | 03/10/09 | Date Received..: | 03/11/09 | | |
| Prep Date.....: | 03/12/09 | Analysis Date..: | 03/14/09 | | |
| Prep Batch #...: | 9076404 | | | | |
| Dilution Factor: | 499.5 | | | | |
| % Moisture.....: | 16 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 870 | 120 | mg/kg | 2.6 |
| 2,6-Dinitrotoluene | 250 | 120 | mg/kg | 3.6 |
| Nitroglycerin | ND R | 250 | mg/kg | 7.5 |
| 2-Nitrotoluene | 200 | 120 | mg/kg | 6.5 |
| 4-Nitrotoluene | 110 J J | 250 | mg/kg | 9.1 |
| 2,4,6-Trinitrotoluene | 1200 | 120 | mg/kg | 9.7 |
| 1,3-Dinitrobenzene | ND R | 120 | mg/kg | 2.1 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Aluminum and Lead
Test America Laboratories, Inc., SDG G9C240231

**DATE:** May 8, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on March 23, 2009. Solid samples were analyzed for aluminum and lead using USEPA SW-846 3050B/6010B for ICP metals. A total of fifteen solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC27 | G9C240231-001 | 51SC35 | G9C240231-009 |
| 51SC28 | G9C240231-002 | 51SC36 | G9C240231-010 |
| 51SC29 | G9C240231-003 | 51SC37 | G9C240231-011 |
| 51SC30 | G9C240231-004 | 51SC38 | G9C240231-012 |
| 51SC31 | G9C240231-005 | 51SC39 | G9C240231-013 |
| 51SC32 | G9C240231-006 | 51SC40 | G9C240231-014 |
| 51SC33 | G9C240231-007 | 51SC41 | G9C240231-015 |
| 51SC34 | G9C240231-008 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Blank Analysis |
| | X | ICP Interference Check Sample (ICS) |
| | X | Laboratory Control Sample (LCS) |
| | X | Laboratory Sample Duplicate |
| | X | Matrix Spike and Spike Duplicate |
| | X | ICP Serial Dilution |
| | X | Field Sample Duplicate |
| | X | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable.

Eric Malarek, Chemist

5/8/09
Date

**RFAAP VALIDATION REPORT**
**METALS REVIEW**
**SDG G9C240231**

## I-Holding Times and Preservation

The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: For solid matrices, the samples are shipped at ambient temperature for ICP metals (cool @4°C±2°C if with other tests) with a maximum holding time is 180 days.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/23/09, the coolers were received on by the primary laboratory (Test America) on 03/24/09 at 5.0°C, 6.0°C, and 5.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 03/23/09 for metals analysis. For solid samples, the soil samples were digested on 03/25/09 and analyzed on 03/25/09 for ICP metals. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Initial and Continuing Calibration

Requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

ICP: 1- blank (DoD QSM <½ MRL)
3 – standards ($r \geq 0.995$)
ICV/CCV (90-110%) (DoD QSM 90-110%)
MRL (70-130%) (DoD QSM 80-120%)
High Std. (95-105%)

- The solid samples were analyzed for ICP metals on 03/25/09. All ICV/CCV/High Standard/MRL criteria were met for aluminum and lead for all runs. No qualifiers were applied.

## III-Blanks

Blanks (preparation and calibration blanks) are assessed to determine the existence and magnitude of contamination problems. No contaminants should be detected (i.e. <MDL) in any of the associated blanks. DoD QSM limits are <½MRL for the method blank and <2*MDL for the calibration blanks. Samples are qualified "B" when they are less than 5x the absolute value of the maximum blank concentration. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10 for ICP) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | Analysis | QC Blank ID | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 03/25/09 | ICP Al & Pb | ICB/CCBs | <2*MDL | NA | None |
| 03/25/09 | ICP Al & Pb | G9C250000-099 | <1/2*MRL | NA | None |

NA = Not Applicable
MDL = Method Detection Limit.
MRL = Method Reporting Limit.

**IV-ICP Interference Check Sample (ICS)**
The ICP interference check sample (ICS) verifies interelement and background correction factors. ICP Interference Check is performed at the beginning and end of each sample analysis run. Control limits are 80-120% (DoD QSM limits 80-120%).

- All criteria were met. No qualifiers were applied.

**V-Laboratory Control Samples (LCS)**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All aqueous LCS results must fall within the control limits. The DoD QSM solid LCS recovery limits are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9C250000-099 was used as solid LCS for ICP metals analysis on 03/25/09. All criteria were met. No qualifiers were applied. Samples 51SC27 (G9C240231-001), 51SC28 (G9C240231-002), 51SC29 (G9C240231-003), 51SC30 (G9C240231-004), 51SC31 (G9C240231-005), 51SC32 (G9C240231-006), 51SC33 (G9C240231-007), 51SC34 (G9C240231-008), 51SC35 (G9C240231-009), 51SC36 (G9C240231-010), 51SC37 (G9C240231-011), 51SC38 (G9C240231-012), 51SC39 (G9C240231-013), 51SC40 (G9C240231-014), and 51SC41 (G9C240231-015) apply to this LCS.

**VI-Laboratory Duplicate Sample Analysis**
Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits. DoD QSM limits for metals are 20% RPD for ICP metals.

- No laboratory duplicate was analyzed. Laboratory precision was evaluated using the Matrix Spike and Matrix Spike Duplicate (Section VII).

**VII-Matrix Spike/Spike Duplicate**
MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Specific criteria include the analyses of matrix spike and matrix spike duplicate samples at a frequency of one MS and MSD per 20 samples of similar matrix. MS and MSD recoveries and relative percent differences between MS and MSD recoveries should be within the specified limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used. Post digestion spikes limits are 75-125% for ICP metals.

- Sample 51SC27 (G9C240231-001) was used as solid laboratory MS/MSD for ICP metals analysis on 03/25/09. Aluminum (2810%, 3980%) was outside criteria. All other recoveries and RPD values were within criteria. The associated LCS (Section V) was within criteria. The sample concentration was >4 times the spike added for aluminum; therefore, no qualifiers were applied based upon this outlier. Samples 51SC27 (G9C240231-001), 51SC28 (G9C240231-002), 51SC29 (G9C240231-003), 51SC30 (G9C240231-004), 51SC31 (G9C240231-005), 51SC32 (G9C240231-006), 51SC33 (G9C240231-007), 51SC34 (G9C240231-008), 51SC35 (G9C240231-009), 51SC36 (G9C240231-010), 51SC37 (G9C240231-011), 51SC38 (G9C240231-012), 51SC39 (G9C240231-013), 51SC40 (G9C240231-014), and 51SC41 (G9C240231-015) apply to this MS/MSD.

**VIII-ICP Serial Dilution**
An ICP serial dilution is performed to determine whether significant physical or chemical interferences exist due to sample matrix at high concentrations. An analysis of a 5-fold dilution should agree within 10% difference of the original result when the concentration in sample is a factor of 50 above MDL.

- The serial dilution for ICP metals was analyzed on 03/25/09 using solid sample 51SC27 (G9C240231-001). All criteria were met for aluminum and lead. No qualifiers were applied. Samples 51SC27 (G9C240231-001), 51SC28 (G9C240231-002), 51SC29 (G9C240231-003), 51SC30 (G9C240231-004), 51SC31 (G9C240231-005), 51SC32 (G9C240231-006), 51SC33 (G9C240231-007), 51SC34 (G9C240231-008), 51SC35 (G9C240231-009), 51SC36 (G9C240231-010), 51SC37 (G9C240231-011), 51SC38 (G9C240231-012), 51SC39 (G9C240231-013), 51SC40 (G9C240231-014), and 51SC41 (G9C240231-015) apply to this serial dilution.

**IX-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 35% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**X-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification.

**Sample: 51SC27 (G9C240231-001), Lead**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(133.13 µg/L)*(0.100 L)*(1)} / {(1.04 g)*(0.8109)} = 15.8 µg/g = 15.8 mg/kg

Reported concentration = 15.8 mg/kg
%D = 0.6%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC27**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-001 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **24500** | **25.9** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K826T1A5** |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| **Lead** | **15.8** | **2.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K826T1A6** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC28**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-002 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **24600** | **26.1** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CE1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.7 | | |
| **Lead** | **15.6** | **2.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CE1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC29**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-003 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 20

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **26600** | **26.1** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CF1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.7 | | |
| **Lead** | **13.9** | **2.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CF1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.75 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC30**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-004 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **24600** | **26.0** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CG1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.7 | | |
| **Lead** | **13.3** | **2.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CG1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC31**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-005 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **27800** | **25.8** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CH1A6** |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| **Lead** | **16.1** | **2.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CH1A7** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC32**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-006 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **24200** | **25.7** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CJ1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| **Lead** | **16.4** | **2.4** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CJ1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC33**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-007 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **24200** | **25.4** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CK1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| **Lead** | **16.5** | **2.4** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CK1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC34**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-008 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **22700** | **25.7** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CL1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| **Lead** | **16.8** | **2.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CL1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC35**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-009 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 12

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **19000** | **24.0** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CM1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.0 | | |
| **Lead** | **13.7** | **2.3** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CM1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.69 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC36**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-010 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 14

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **17500** | **24.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CN1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.2 | | |
| **Lead** | **14.1** | **2.3** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CN1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.70 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC37**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-011 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 12

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **15500** | **23.8** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CP1AH** |
| | | Dilution Factor: 1 | | MDL.....: 7.9 | | |
| **Lead** | **12.6** | **2.3** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CP1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.68 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC38**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-012 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 13

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **20700** | **24.3** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CQ1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.1 | | |
| **Lead** | **26.4** | **2.3** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CQ1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.69 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC39**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-013 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 20

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **33700** | **26.4** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CR1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.8 | | |
| **Lead** | **11.8** | **2.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CR1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.75 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC40**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-014 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 21

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **33500** | **26.4** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CT1AH** |
| | | Dilution Factor: 1 | | MDL.....: 8.8 | | |
| **Lead** | **23.6** | **2.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CT1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.76 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC41**

**TOTAL Metals**

**Lot-Sample #...:** G9C240231-015 **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**% Moisture.....:** 20

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9084099 | | | | | | |
| **Aluminum** | **35000** | **26.3** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CV1AP** |
| | | Dilution Factor: 1 | | MDL.....: 8.8 | | |
| **Lead** | **15.1** | **2.5** | **mg/kg** | **SW846 6010B** | **03/25/09** | **K83CV1AQ** |
| | | Dilution Factor: 1 | | MDL.....: 0.75 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Dioxin Furans
Test America Laboratories, Inc., SDG G9C240231

**DATE:** May 11, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on March 23, 2009. The samples were analyzed for Dioxin Furan compounds using USEPA SW-846 Method 8290 High Resolution Gas Chromatography/High Resolution Mass Spectroscopy (HRGC/HRMS). A total of four soil samples (two diluted samples included) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC31 | G9C240231-005 | 51SC41 | G9C240231-015 |
| 51SC31 | G9C240231-005DL | 51SC41 | G9C240231-015DL |

Data were reviewed and validated using a combination of project QAPP, *DOD Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *USEPA Region III Dioxin/Furan Data Validation Guidance* (March, 1999). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| X | | Blank Analysis |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Internal Standards (IS) Recovery Standard Solutions |
| | X | Cleanup Standards |
| | X | Laboratory Control Standard or Ongoing Precision Result (OPR) |
| | X | Matrix Spike and Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. For where the target compound OCDD exceeded the calibration range for samples 51SC31 (G9C240231-005) and 51SC41 (G9C240231-015), the data point was qualified rejected "R" for data usability. The second diluted run data reported should be used only for the compounds meeting this condition. There were no impacts to the data completeness.

Eric Malarek, Chemist

5/11/09

Date

**RFAAP VALIDATION REPORT**
**DIOXIN FURAN REVIEW**
**SDG G9C240231**

## I-Holding Times and Preservation

The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, dioxin and furans are shipped cooled (@4°C ± 2°C) with a maximum holding time of 30 days from sample collection to preparative extraction and 45 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/23/09, the coolers were received on by the primary laboratory (Test America) on 03/24/09 at 5.0°C, 6.0°C, and 5.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: For the soil samples collected 03/23/09, the dioxins and furans were extracted on 03/26/09 and analyzed on 03/27/09 and 03/30/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Blank Analysis

The purpose of laboratory (or field) blank analyses is to determine the existence and magnitude of contamination problems resulting from field and laboratory activities. No contamination should be found in any of the blanks >EDL (estimated detection limit). The DoD QSM criteria specifies all concentrations should be less than ½ MRL (<MRL for common laboratory contaminants OCDD and OCDF) and <2*EDL for the calibration blanks. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants OCDD or OCDF, or 5 times (5X) the maximum amount for other target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 100) if needed. The soil samples were sampled with directly into the sample jars from the excavator bucket; therefore, no rinse blank applies to these samples.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. pg/g | Action Level pg/g | B qualified samples |
|---|---|---|---|---|---|
| 03/27/09 | G9C250000-486B | Total TCDD | 0.29 | 1.45 | 51SC31, 51SC41 |
| 03/27/09 | G9C250000-486B | 1,2,3,6,7,8-HxCDD | 0.067J | 0.34 | 51SC41 |
| 03/27/09 | G9C250000-486B | Total HxCDD | 0.067 | 0.34 | None |
| 03/27/09 | G9C250000-486B | 1,2,3,4,6,7,8-HpCDD | 0.34J | 1.70 | None |
| 03/27/09 | G9C250000-486B | Total HpCDD | 0.66 | 3.30 | None |
| 03/27/09 | G9C250000-486B | OCDD | 1.2J | 12.0 | None |
| 03/27/09 | G9C250000-486B | Total TCDF | 0.30 | 1.50 | 51SC31, 51SC41 |
| 03/27/09 | G9C250000-486B | Total PeCDF | 0.60 | 3.00 | 51SC31, 51SC41 |
| 03/27/09 | G9C250000-486B | 1,2,3,4,6,7,8-HpCDF | 0.27J | 1.35 | 51SC41 |
| 03/27/09 | G9C250000-486B | 1,2,3,4,7,8,9-HpCDF | 0.18J | 0.90 | 51SC31, 51SC41 |
| 03/27/09 | G9C250000-486B | Total HpCDF | 0.51 | 2.55 | 51SC41 |
| 03/27/09 | G9C250000-486B | OCDF | 0.29J | 2.90 | 51SC41 |

J = Estimated value >EDL and <MRL.

**III-Instrument Performance Check**
Instrument must be tuned with perfluorokerosene (PFK) to achieve a static resolving power of at least 10,000 (10% valley) and lock-mass ion between lowest and highest masses for each descriptor and level of reference compound ≤10%. Documentation of the mass spectrometer resolving power is accomplished by recording the peak profile of the high-mass reference signal (typically m/z 330.9792) obtained during a peak examination by using the low-mass PFK ion at m/z 292.9825 or lower in mass as reference. At the beginning of the each 12-hour period, the chromatographic resolution is verified in the same fashion as in the initial calibration through the analysis of HRCC solution on the DB-5 (or equivalent) column or through the analysis of the column performance solution on the SP-2331 or SP-225 (or equivalent) column. A 25% valley must be achieved between the close eluters.

- All PFK forms were verified and found to be in compliance with method specification. No qualifiers were applied.

**IV-Initial Calibration**
Once the window defining mix has been analyzed and the descriptor switching times have been verified, the five point calibration solutions can be analyzed prior to sample analysis. Per method and DoD QSM, the initial calibration criteria are as follows:

  - The percent relative standard deviations for the mean response factors RRF(n) from the 17 unlabeled standards must not exceed ±20%, and those for the labeled reference compounds must not exceed ±30%;
  - The signal to noise ratio ≥10% for all target ions;
  - Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For initial calibration performed on 02/11/09 for all target compounds on instrument 4D5, all criteria were met. No qualifiers were applied. Samples 51SC31 (G9C240231-005), 51SC31 (G9C240231-005DL), 51SC41 (G9C240231-015), and 51SC41 (G9C240231-015DL) apply to this initial calibration.

**V-Continuing Calibration**
The continuing calibration consists of two parts: evaluation of the mass resolution and retention time check. Per method and DoD QSM, the following stipulates the continuing calibration criteria.

  - The signal signal-to-noise ratio (S/N) must be at least 10:1 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard for each analyte.
  - The relative response factor of each analyte for the unlabeled standard must be within ±20% of the average RF obtained from the initial calibration, and the RRF of each labeled standard must be within ±30% of the average RRF established during initial calibration. This is expressed in term of percent difference %D.
  - Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For continuing calibration performed on 03/27/09 @19:02 on instrument 4D5, all criteria were met. No qualifiers were applied. Samples 51SC31 (G9C240231-005) and 51SC41 (G9C240231-015) apply to this continuing calibration.

- For continuing calibration performed on 03/27/09 @23:24 on instrument 4D5, all criteria were met. No qualifiers were applied. Samples 51SC31 (G9C240231-005) and 51SC41 (G9C240231-015) apply to this continuing calibration.

- For continuing calibration performed on 03/30/09 @19:39 on instrument 4D5, congener 13C-1,2,3,4,7,8-HxCDF (39.5%), 1,2,3,6,7,8-HxCDF (-21.7%), and 13C-1,2,3,4,6,7,8-HpCDD were outside criteria. For all other congeners and labeled standards, all criteria were met. Only OCDD was reported for the associated samples using this continuing calibration; therefore, no qualifiers were applied based upon these outliers. Samples 51SC31 (G9C240231-005DL) and 51SC41 (G9C240231-015DL) apply to this continuing calibration.

- For continuing calibration performed on 03/30/09 @20:35 on instrument 4D5, congener 13C-1,2,3,4,7,8-HxCDF (37.1%) and 1,2,3,6,7,8-HxCDF (-20.1%) were outside criteria. For all other congeners and labeled standards, all criteria were met. Only OCDD was reported for the associated samples using this continuing calibration; therefore, no qualifiers were applied based upon these outliers. Samples 51SC31 (G9C240231-005DL) and 51SC41 (G9C240231-015DL) apply to this continuing calibration.

**VI-Internal Standards (IS) Recovery Standard Solutions**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Specific criteria include: Recoveries of the isotopically-labeled recovery standards to fall within the 40 to 135 percent range for the tetra- through octachlorinated congeners, or as stated in the data package (DoD QSM limits 40-135%).

- All criteria were met. No qualifiers were applied.

**VII-Cleanup Standards**
Cleanup standards are added to every sample, blank, quality control sample, and calibration solution. This compound is added to the samples after extraction but prior to cleanup and is used to verify the percent recovery obtained using the isotope dilution technique. The control limits are 40 to 135 percent (DoD QSM limits 40-135%).

- All criteria were met. No qualifiers were applied.

**VIII-Laboratory Control Standard (LCS) or Ongoing Precision Result (OPR)**
LCSs are used to monitor laboratory accuracy and precision by calculating the percent recoveries of the spiked compounds. Per DOD QSM and method criteria, acceptable performance is determined by:

1. Recoveries of the isotopically-labeled extraction standards to fall within 40-135% control limits for the tetra- through octachlorinated congeners, or as stated in the data package;

2. Recoveries (accuracy) of the unlabeled compounds should be within $\pm$35% when spiked at the method quantitation limit and within $\pm$30% when spiked above 20 times the method quantitation limit, or as stated in the data package;

3. When duplicate OPR are required, the relative percent difference (RPD) of the unlabeled analytes concentrations should be within 30% when spiked at the method quantitation limit and within $\pm$20% when spiked above 20 times the method quantitation limit.

- Sample G9C250000-486 was used as LCS and LCSD on 03/27/09 analytical run. All criteria were met. No qualifiers were applied. Samples 51SC31 (G9C240231-005), 51SC31 (G9C240231-005DL), 51SC41 (G9C240231-015), and 51SC41 (G9C240231-015DL) apply to this LCS.

**IX-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. Per DoD QSM, MS/MSD recoveries must be within in-house laboratory limits (75-125%) and RPD ≤20%.

- No project specific soil matrix MS/MSD was performed in this SDG; therefore, it was not evaluated.

**X-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid matrix samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific aqueous field duplicate was performed in this SDG; therefore, it was not evaluated.

**XI-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification. Any value reported by the laboratory as estimated based on an analyte to internal standard ratio below the calibration curve was qualified as estimated "J". The signal signal-to-noise ratio (S/N) must be greater than 2.5 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard. Any detected value with ether interference was qualified as estimated "J". For where the ion ratio failed the 25% criteria (JA-lab flag), the estimated maximum possible concentration (EMPC) was reported and flagged estimated "J". For where presence of quantitation interference, the date was flagged estimated "J" for detects and "UJ" for non-detects.

- For samples 51SC31 (G9C240231-005) and 51SC41 (G9C240231-015), target compound OCDD exceeded the calibration range (E-lab flag), the data point was qualified rejected "R" for data usability. The second diluted run data reported should be used only for the compounds meeting this condition. There were no impacts to the data completeness.

**Sample: 51SC31 (G9C240231-005DL), OCDD**

A(x) = sum of the integrated ion abundances of the quantitation ions for the unlabeled ions;

A(is) = sum of the integrated ion abundances of the quantitation ions for the labeled ions;

Q(is) = quantity, in pg, of the internal standard added to the sample before extraction; Here need to multiply concentration (pg/uL) by final extract volume (uL).

W = weight, in g, of the sample (solid or organic liquid) as dry weight, or volume in mL of an aqueous sample; and

Avg. RRF(n) = calculated mean relative response factor for the unlabeled analyte.

$$\text{Conc. (ng/kg)} = \frac{(A(x))*Q(is)}{A(is) * W * \text{Avg. RRF}} = \frac{(469010000)*4.0*1000}{(30230800) * (10.04 * 0.8109) * 1.115} =$$

= 6836 ng/kg = 6800 pg/g

Reported Value = 6800 pg/g
% Difference = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% RPD for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitaion limit may be inaccurate or imprecise. |
| N | Tenative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identificaition questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitaion limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from USEPA Region III Dioxin/Furan Data Validation Guidance (March, 1999) and Region III Modifications to the National Functional Guidelines for Organic Data Review (September 1994).

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 51SC31**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C240231 - 005 | **Work Order #....:** | K83CH1A5 | **Matrix.....:** | SO |
| **Date Sampled....:** | 03/23/09 | **Date Received....:** | 03/24/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/26/09 | **Analysis Date....:** | 03/27/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9084486 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.04 g | **Analyst ID....:** | Susan X. Yan | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.074 | pg/g |
| **Total TCDD** | **0.22** | B | 1.2 | 0.029 | pg/g |
| **1,2,3,7,8-PeCDD** | **0.24** | J J | 6.1 | 0.082 | pg/g |
| **Total PeCDD** | **0.40** | | 6.1 | 0.082 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.53** | J J | 6.1 | 0.049 | pg/g |
| **1,2,3,6,7,8-HxCDD** | **0.87** | J B J | 6.1 | 0.039 | pg/g |
| **1,2,3,7,8,9-HxCDD** | **1.3** | J J | 6.1 | 0.039 | pg/g |
| **Total HxCDD** | **7.7** | | 6.1 | 0.042 | pg/g |
| **1,2,3,4,6,7,8-HpCDD** | **81** | B | 6.1 | 0.48 | pg/g |
| **Total HpCDD** | **160** | | 6.1 | 0.48 | pg/g |
| **OCDD** | **6700** | E B R | 12 | 2.1 | pg/g |
| 2,3,7,8-TCDF | ND | | 1.2 | 0.20 | pg/g |
| **Total TCDF** | **0.31** | B | 1.2 | 0.060 | pg/g |
| **1,2,3,7,8-PeCDF** | **0.078** | J J | 6.1 | 0.034 | pg/g |
| **2,3,4,7,8-PeCDF** | **0.087** | J J | 6.1 | 0.036 | pg/g |
| **Total PeCDF** | **0.78** | B | 6.1 | 0.034 | pg/g |
| **1,2,3,4,7,8-HxCDF** | **0.29** | J J | 6.1 | 0.042 | pg/g |
| **1,2,3,6,7,8-HxCDF** | **0.14** | J J | 6.1 | 0.034 | pg/g |
| **2,3,4,6,7,8-HxCDF** | **0.16** | J J | 6.1 | 0.038 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 6.1 | 0.043 | pg/g |
| **Total HxCDF** | **2.2** | | 6.1 | 0.039 | pg/g |
| **1,2,3,4,6,7,8-HpCDF** | **3.6** | J B J | 6.1 | 0.063 | pg/g |
| **1,2,3,4,7,8,9-HpCDF** | **0.32** | J B B | 6.1 | 0.077 | pg/g |
| **Total HpCDF** | **8.3** | | 6.1 | 0.069 | pg/g |
| **OCDF** | **6.4** | J B J | 12 | 0.081 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 51SC31**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C240231 - 005 | **Work Order #....:** | K83CH1A5 | **Matrix.....:** | SO |
| **Date Sampled....:** | 03/23/09 | **Date Received....:** | 03/24/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/26/09 | **Analysis Date....:** | 03/27/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9084486 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.04 g | **Analyst ID....:** | Susan X. Yan | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 79 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 74 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 78 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 100 | 40 - 135 |
| 13C-OCDD | 103 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 73 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 70 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 91 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 90 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated Result.

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 51SC31**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C240231 - 005 | **Work Order #....:** | K83CH2A5 | **Matrix....:** | SO |
| **Date Sampled....:** | 03/23/09 | **Date Received....:** | 03/24/09 | **Dilution Factor:** | 10 |
| **Prep Date....:** | 03/26/09 | **Analysis Date....:** | 03/30/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9084486 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.04 g | **Analyst ID....:** | Susan X. Yan | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | R | 12 | 0.25 | pg/g |
| Total TCDD | ND | | 12 | 0.25 | pg/g |
| **1,2,3,7,8-PeCDD** | **0.37** | **J** | **61** | **0.33** | **pg/g** |
| **Total PeCDD** | **0.37** | | **61** | **0.33** | **pg/g** |
| 1,2,3,4,7,8-HxCDD | ND | | 61 | 1.2 | pg/g |
| 1,2,3,6,7,8-HxCDD | ND | | 61 | 0.99 | pg/g |
| 1,2,3,7,8,9-HxCDD | ND | | 61 | 1.2 | pg/g |
| Total HxCDD | ND | | 61 | 0.28 | pg/g |
| **1,2,3,4,6,7,8-HpCDD** | **83** | **B** | **61** | **1.8** | **pg/g** |
| **Total HpCDD** | **160** | | **61** | **1.8** | **pg/g** |
| **OCDD** | **6800** | **B** | **120** | **0.56** | **pg/g** |
| 2,3,7,8-TCDF | ND | R | 12 | 0.23 | pg/g |
| **Total TCDF** | **0.16** | | **12** | **0.14** | **pg/g** |
| 1,2,3,7,8-PeCDF | ND | | 61 | 0.16 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 61 | 0.17 | pg/g |
| Total PeCDF | ND | | 61 | 0.26 | pg/g |
| 1,2,3,4,7,8-HxCDF | ND | | 61 | 0.32 | pg/g |
| 1,2,3,6,7,8-HxCDF | ND | | 61 | 0.19 | pg/g |
| 2,3,4,6,7,8-HxCDF | ND | | 61 | 0.36 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 61 | 0.31 | pg/g |
| Total HxCDF | ND | | 61 | 0.069 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | ND | | 61 | 3.5 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | ND | | 61 | 0.40 | pg/g |
| Total HpCDF | ND | | 61 | 0.36 | pg/g |
| OCDF | ND | | 120 | 4.0 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 51SC31**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C240231 - 005 | **Work Order #....:** | K83CH2A5 | **Matrix....:** | SO |
| **Date Sampled....:** | 03/23/09 | **Date Received....:** | 03/24/09 | **Dilution Factor:** | 10 |
| **Prep Date....:** | 03/26/09 | **Analysis Date....:** | 03/30/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9084486 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.04 g | **Analyst ID....:** | Susan X. Yan | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 81 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 75 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 93 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 96 | 40 - 135 |
| 13C-OCDD | 94 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 74 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 69 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 86 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 93 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

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**Shaw E & I Inc**

**Sample ID: 51SC41**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C240231 - 015 | **Work Order #....:** | K83CV1AG | **Matrix....:** | SO |
| **Date Sampled....:** | 03/23/09 | **Date Received....:** | 03/24/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/26/09 | **Analysis Date....:** | 03/27/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9084486 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID....:** | Susan X. Yan | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.3 | 0.12 | pg/g |
| **Total TCDD** | **0.18** | **B** | **1.3** | **0.031** | **pg/g** |
| 1,2,3,7,8-PeCDD | ND | | 6.3 | 0.16 | pg/g |
| **Total PeCDD** | **0.060** | | **6.3** | **0.056** | **pg/g** |
| **1,2,3,4,7,8-HxCDD** | **0.46** | **J** | **6.3** | **0.048** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.42** | **J B** | **6.3** | **0.038** | **pg/g** |
| 1,2,3,7,8,9-HxCDD | ND | | 6.3 | 0.75 | pg/g |
| **Total HxCDD** | **4.1** | | **6.3** | **0.040** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **65** | **B** | | **0.66** | **pg/g** |
| **Total HpCDD** | **130** | | | **0.66** | **pg/g** |
| **OCDD** | **6500** | **E B** | 13 | **2.4** | **pg/g** |
| **2,3,7,8-TCDF** | **0.15** | **J** | **1.3** | **0.040** | **pg/g** |
| **Total TCDF** | **0.25** | **B** | **1.3** | **0.040** | **pg/g** |
| 1,2,3,7,8-PeCDF | ND | | 6.3 | 0.097 | pg/g |
| **2,3,4,7,8-PeCDF** | **0.10** | **J** | **6.3** | **0.031** | **pg/g** |
| **Total PeCDF** | **0.25** | **B** | **6.3** | **0.030** | **pg/g** |
| 1,2,3,4,7,8-HxCDF | ND | | 6.3 | 0.12 | pg/g |
| 1,2,3,6,7,8-HxCDF | ND | | 6.3 | 0.084 | pg/g |
| **2,3,4,6,7,8-HxCDF** | **0.097** | **J** | **6.3** | **0.016** | **pg/g** |
| 1,2,3,7,8,9-HxCDF | ND | | 6.3 | 0.20 | pg/g |
| **Total HxCDF** | **0.13** | | **6.3** | **0.018** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.43** | **J B** | **6.3** | **0.040** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **0.15** | **J B** | **6.3** | **0.049** | **pg/g** |
| **Total HpCDF** | **0.84** | | **6.3** | **0.044** | **pg/g** |
| **OCDF** | **0.80** | **J B** | 13 | **0.075** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 51SC41**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C240231 - 015 | **Work Order #....:** | K83CV1AG | **Matrix.....:** | SO |
| **Date Sampled....:** | 03/23/09 | **Date Received....:** | 03/24/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 03/26/09 | **Analysis Date....:** | 03/27/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9084486 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID....:** | Susan X. Yan | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 82 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 78 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 77 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 91 | 40 - 135 |
| 13C-OCDD | 85 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 78 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 73 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 90 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 80 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated Result.

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 51SC41**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C240231 - 015 | **Work Order #....:** | K83CV2AG | **Matrix.....:** | SO |
| **Date Sampled....:** | 03/23/09 | **Date Received....:** | 03/24/09 | **Dilution Factor:** | 10 |
| **Prep Date.....:** | 03/26/09 | **Analysis Date....:** | 03/30/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9084486 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID.....:** | Susan X. Yan | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| **2,3,7,8-TCDD** | **0.18** | **J** | **13** | **0.033** | **pg/g** |
| **Total TCDD** | **0.61** | | **13** | **0.033** | **pg/g** |
| 1,2,3,7,8-PeCDD | ND | | 63 | 0.27 | pg/g |
| Total PeCDD | ND | | 63 | 0.27 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 63 | 0.64 | pg/g |
| 1,2,3,6,7,8-HxCDD | ND | | 63 | 0.51 | pg/g |
| **1,2,3,7,8,9-HxCDD** | **0.80** | **J** | **63** | **0.50** | **pg/g** |
| **Total HxCDD** | **0.80** | | **63** | **0.54** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **57** | **J B** | **63** | **1.4** | **pg/g** |
| **Total HpCDD** | **110** | | **63** | **1.4** | **pg/g** |
| **OCDD** | **6700** | **B** | **130** | **0.61** | **pg/g** |
| 2,3,7,8-TCDF | ND | | 13 | 0.14 | pg/g |
| Total TCDF | ND | | 13 | 0.14 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 63 | 0.17 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 63 | 0.17 | pg/g |
| Total PeCDF | ND | | 63 | 0.20 | pg/g |
| 1,2,3,4,7,8-HxCDF | ND | | 63 | 0.23 | pg/g |
| 1,2,3,6,7,8-HxCDF | ND | | 63 | 0.15 | pg/g |
| 2,3,4,6,7,8-HxCDF | ND | | 63 | 0.036 | pg/g |
| **1,2,3,7,8,9-HxCDF** | **0.22** | **J** | **63** | **0.041** | **pg/g** |
| **Total HxCDF** | **0.40** | | **63** | **0.038** | **pg/g** |
| 1,2,3,4,6,7,8-HpCDF | ND | | 63 | 0.24 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | ND | | 63 | 0.25 | pg/g |
| Total HpCDF | ND | | 63 | 0.22 | pg/g |
| OCDF | ND | | 130 | 1.0 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 51SC41**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9C240231 - 015 | **Work Order #....:** | K83CV2AG | **Matrix.....:** | SO |
| **Date Sampled....:** | 03/23/09 | **Date Received....:** | 03/24/09 | **Dilution Factor:** | 10 |
| **Prep Date....:** | 03/26/09 | **Analysis Date....:** | 03/30/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9084486 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID....:** | Susan X. Yan | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 82 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 72 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 88 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 88 | 40 - 135 |
| 13C-OCDD | 72 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 78 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 69 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 78 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 77 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Explosives
Test America Laboratories, Inc., SDG G9C240231

**DATE:** May 12, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on March 23, 2009. Solid samples were analyzed for explosives using USEPA SW-846 8330B. A total of twenty-six solid samples (ten diluted sample included) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC27 | G9C240231-001 | 51SC34 | G9C240231-008 |
| 51SC27 | G9C240231-001DL | 51SC34 | G9C240231-008DL |
| 51SC28 | G9C240231-002 | 51SC35 | G9C240231-009 |
| 51SC28 | G9C240231-002DL | 51SC35 | G9C240231-009DL |
| 51SC29 | G9C240231-003 | 51SC36 | G9C240231-010 |
| 51SC29 | G9C240231-003DL | 51SC36 | G9C240231-010DL |
| 51SC30 | G9C240231-004 | 51SC37 | G9C240231-011 |
| 51SC30 | G9C240231-004DL | 51SC38 | G9C240231-012 |
| 51SC31 | G9C240231-005 | 51SC38 | G9C240231-012DL |
| 51SC32 | G9C240231-006 | 51SC39 | G9C240231-013 |
| 51SC32 | G9C240231-006DL | 51SC39 | G9C240231-013RE |
| 51SC33 | G9C240231-007 | 51SC40 | G9C240231-014 |
| 51SC33 | G9C240231-007DL | 51SC41 | G9C240231-015 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| X | | System Monitoring Compounds |
| | X | Laboratory Control Sample |
| | X | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. For sample 51SC39 (G9C240231-013), the surrogate 3,4-dinitrotoluene was below criteria. Target compound 2,4,6-trinitrotoluene exceeded the calibration range for samples 51SC27 (G9C240231-001), 51SC28 (G9C240231-002), 51SC29 (G9C240231-003), 51SC30 (G9C240231-004), 51SC32 (G9C240231-006), 51SC33 (G9C240231-007), 51SC34 (G9C240231-008), 51SC35 (G9C240231-009), 51SC36 (G9C240231-010), and 51SC38 (G9C240231-012). Target compound 2,4-dinitrotoluene exceeded the calibration range for sample 51SC36 (G9C240231-010). These data points were qualified rejected "R" for data usability. The second diluted run data or re-analysis data reported should be used only for these compounds meeting this condition. There were no impacts to the data completeness.

Eric Malarek, Chemist

5/12/09
Date

**RFAAP VALIDATION REPORT**
**EXPLOSIVES REVIEW**
**SDG G9C240231**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, explosive compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/23/09, the coolers were received on by the primary laboratory (Test America) on 03/24/09 at 5.0°C, 6.0°C, and 5.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 03/23/09. For the solid samples, the samples for explosive were extracted on 03/25/09 (04/03/09 for sample 51SC39 (G9C240231-013RE). The samples were analyzed on 03/26/09, 03/27/09, and 03/28/09 (04/07/09 for sample 51SC39 (G9C240231-013RE). Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**
The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. No contaminants should be present in the blanks. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5x) the maximum amount for explosive target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 03/26/09 | G9C250000-493 | All target explosives <½MRL | NA | NA | None |
| 04/07/09 | G9D030000-288 | All target explosives <½MRL | NA | NA | None |

MRL = Method Reporting Limit
NA = Not Applicable

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5-point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. The DoD QSM specifies that the correlation coefficient must be ≥0.995 and/or the percent relative standard deviation (%RSD) must be ≤20%. All detects were qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For the explosives initial calibration performed on 09/27/08 on instrument LC10.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Samples 51SC27 (G9C240231-001), 51SC27 (G9C240231-001DL), 51SC28 (G9C240231-002), 51SC28 (G9C240231-002DL), 51SC29 (G9C240231-003), 51SC29 (G9C240231-003DL), 51SC30 (G9C240231-004), 51SC30 (G9C240231-004DL), 51SC31 (G9C240231-005), 51SC32 (G9C240231-006), 51SC32 (G9C240231-006DL), 51SC33 (G9C240231-007), 51SC33 (G9C240231-007DL), 51SC34 (G9C240231-008), 51SC34 (G9C240231-008DL), 51SC35 (G9C240231-009), 51SC35 (G9C240231-009DL), 51SC36 (G9C240231-010), 51SC36 (G9C240231-010DL), 51SC37 (G9C240231-011), 51SC38 (G9C240231-012), 51SC38 (G9C240231-012DL), 51SC39 (G9C240231-013), 51SC39 (G9C240231-013RE), 51SC40 (G9C240231-014), 51SC41 (G9C240231-015) apply to this initial calibration.

- For the explosives initial calibration performed on 09/26/08 on instrument LC9.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Confirmations for samples 51SC27 (G9C240231-001), 51SC27 (G9C240231-001DL), 51SC28 (G9C240231-002), 51SC28 (G9C240231-002DL), 51SC29 (G9C240231-003), 51SC29 (G9C240231-003DL), 51SC30 (G9C240231-004), 51SC30 (G9C240231-004DL), 51SC31 (G9C240231-005), 51SC32 (G9C240231-006), 51SC32 (G9C240231-006DL), 51SC33 (G9C240231-007), 51SC33 (G9C240231-007DL), 51SC34 (G9C240231-008), 51SC34 (G9C240231-008DL), 51SC35 (G9C240231-009), 51SC35 (G9C240231-009DL), 51SC36 (G9C240231-010), 51SC36 (G9C240231-010DL), 51SC37 (G9C240231-011), 51SC38 (G9C240231-012), 51SC38 (G9C240231-012DL), 51SC39 (G9C240231-013), 51SC39 (G9C240231-013RE), 51SC40 (G9C240231-014), 51SC41 (G9C240231-015) apply to this initial calibration.

**IV-Continuing Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. Continuing calibration standards are analyzed after every 10 injections, and at the end of the analysis sequence. The DoD QSM specifies that the percent difference (%D) from initial calibration should be no greater than ±20%. All detects were qualified as estimated "J" for where there were exceeding %Ds, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For explosives initial calibration verification performed on 09/27/08 @21:28 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this initial verification calibration.

- For explosives continuing calibration performed on 03/26/09 @14:01 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Sample 51SC27 (G9C240231-001) applies to this continuing calibration.

- For explosives continuing calibration performed on 03/26/09 @23:17 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC28 (G9C240231-002), 51SC29 (G9C240231-003), 51SC30 (G9C240231-004), 51SC31 (G9C240231-005), 51SC32 (G9C240231-006), 51SC33 (G9C240231-007), 51SC34 (G9C240231-008), and 51SC35 (G9C240231-009) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/27/09 @08:33 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC36 (G9C240231-010), 51SC37 (G9C240231-011), 51SC38 (G9C240231-012), 51SC39 (G9C240231-013), 51SC40 (G9C240231-014), 51SC41 (G9C240231-015), 51SC27 (G9C240231-001DL), and 51SC28 (G9C240231-002DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/27/09 @17:52 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC29 (G9C240231-003DL), 51SC30 (G9C240231-004DL), 51SC32 (G9C240231-006DL), 51SC33 (G9C240231-007DL), 51SC34 (G9C240231-008DL), 51SC35 (G9C240231-009DL), 51SC36 (G9C240231-010DL), and 51SC38 (G9C240231-012DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/28/09 @03:10 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 04/07/09 @20:31 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Sample 51SC39 (G9C240231-013RE) applies to this continuing calibration.

- For explosives continuing calibration performed on 04/08/09 @04:06 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives initial calibration verification performed on 09/27/08 @14:26 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No soil samples reported or confirmations apply to this initial verification calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 03/26/09 @14:36 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC27 (G9C240231-001), 51SC28 (G9C240231-002), 51SC29 (G9C240231-003), 51SC30 (G9C240231-004), and 51SC31 (G9C240231-005) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/27/09 @00:58 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC32 (G9C240231-006), 51SC33 (G9C240231-007), 51SC34 (G9C240231-008), 51SC35 (G9C240231-009), 51SC36 (G9C240231-010), 51SC37 (G9C240231-011), 51SC38 (G9C240231-012), 51SC39 (G9C240231-013), and 51SC40 (G9C240231-014) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/27/09 @11:21 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC27 (G9C240231-001DL), 51SC28 (G9C240231-002DL), 51SC29 (G9C240231-003DL), 51SC30 (G9C240231-004DL), 51SC32 (G9C240231-006DL), 51SC33 (G9C240231-007DL), 51SC34 (G9C240231-008DL), 51SC35 (G9C240231-009DL), and 51SC41 (G9C240231-015) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/27/09 @21:58 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC36 (G9C240231-010DL) and 51SC38 (G9C240231-012DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 03/28/09 @03:09 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported or confirmations apply to this continuing calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 04/07/09 @21:15 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmation for 51SC39 (G9C240231-013RE) applies to this continuing calibration.

- For explosives continuing calibration performed on 04/08/09 @07:39 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported or confirmations apply to this continuing calibration; therefore, no qualifiers were applied.

**V-System Monitoring Compound (Surrogates)**
Laboratory performance on individual samples is established by means of spiking activities. The percent recovery (%R) for all samples and blanks must be within the laboratory control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria: 3,4-dinitrotoluene (81-127%)

- For sample 51SC34 (G9C240231-008), the surrogate 3,4-dinitrotoluene (129%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC34 (G9C240231-008DL), the surrogate 3,4-dinitrotoluene (132%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC35 (G9C240231-009), the surrogate 3,4-dinitrotoluene (133%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC35 (G9C240231-009DL), the surrogate 3,4-dinitrotoluene (135%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC36 (G9C240231-010), the surrogate 3,4-dinitrotoluene (168%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC36 (G9C240231-010DL), the surrogate 3,4-dinitrotoluene (172%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC37 (G9C240231-011), the surrogate 3,4-dinitrotoluene (130%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC38 (G9C240231-012DL), the surrogate 3,4-dinitrotoluene (128%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC39 (G9C240231-013), the surrogate 3,4-dinitrotoluene (80%) was below criteria. The sample was re-extracted and re-analyzed with a passing surrogate recovery. The re-extracted sample should be used and the original sample rejected "R" based upon this outlier and for data usability reasons. The second re-analysis run data reported should be used only for the explosive compounds meeting this condition. There were no impacts to the data completeness.

- For all other samples, all criteria were met.

**VI-Laboratory Control Sample**

Laboratory control samples (LCS) are used to monitor long-term accuracy of the analytical method. The analysis is performed at a frequency of 1 per analytical batch. The percent recoveries (%Rs) must be within the laboratory control limits. DoD QSM solid LCS recovery limits are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9C250000-493 was used as solid LCS for explosives analyzed on 03/26-28/09. All criteria were met. No qualifiers were applied. Samples 51SC27 (G9C240231-001), 51SC27 (G9C240231-001DL), 51SC28 (G9C240231-002), 51SC28 (G9C240231-002DL), 51SC29 (G9C240231-003), 51SC29 (G9C240231-003DL), 51SC30 (G9C240231-004), 51SC30 (G9C240231-004DL), 51SC31 (G9C240231-005), 51SC32 (G9C240231-006), 51SC32 (G9C240231-006DL), 51SC33 (G9C240231-007), 51SC33 (G9C240231-007DL), 51SC34 (G9C240231-008), 51SC34 (G9C240231-008DL), 51SC35 (G9C240231-009), 51SC35 (G9C240231-009DL), 51SC36 (G9C240231-010), 51SC36 (G9C240231-010DL), 51SC37 (G9C240231-011), 51SC38 (G9C240231-012), 51SC38 (G9C240231-012DL), 51SC39 (G9C240231-013), 51SC40 (G9C240231-014), 51SC41 (G9C240231-015) apply to this LCS.

- Sample G9D030000-288 was used as solid LCS for explosives analyzed on 04/07/09. All criteria were met. No qualifiers were applied. Sample 51SC39 (G9C240231-013RE) applies to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the laboratory control limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 51SC27 (G9C240231-001) was used as the solid MS/MSD for the explosive analysis on 03/26-28/09. Due to high sample target compound concentrations (>500 times spike added) and required dilutions, the MS/MSD could not be calculated. Therefore, the MS/MSD could not be evaluated. The associated LCS sample (see Section VI) was within criteria. No qualifiers were applied. Samples 51SC27 (G9C240231-001), 51SC27 (G9C240231-001DL), 51SC28 (G9C240231-002), 51SC28 (G9C240231-002DL), 51SC29 (G9C240231-003), 51SC29 (G9C240231-003DL), 51SC30 (G9C240231-004), 51SC30 (G9C240231-004DL), 51SC31 (G9C240231-005), 51SC32 (G9C240231-006), 51SC32 (G9C240231-006DL), 51SC33 (G9C240231-007), 51SC33 (G9C240231-007DL), 51SC34 (G9C240231-008), 51SC34 (G9C240231-008DL), 51SC35 (G9C240231-009), 51SC35 (G9C240231-009DL), 51SC36 (G9C240231-010), 51SC36 (G9C240231-010DL), 51SC37 (G9C240231-011), 51SC38 (G9C240231-012), 51SC38 (G9C240231-012DL), 51SC39 (G9C240231-013), 51SC40 (G9C240231-014), 51SC41 (G9C240231-015) apply to this MS/MSD.

- Sample G9D010148-001 was used as the solid MS/MSD for the explosive analysis on 04/08/09. The spiked sample was not a site specific sample; therefore, the MS/MSD was not evaluated for this batch. Sample 51SC39 (G9C240231-013RE) applies to this MS/MSD.

**VIII-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**IX-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The calculation was based calibration factors. The absolute percent difference (%D) between the calculated and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns.

- All values >MDL and <MRL or <3*MDL (whichever was greater) were qualified as estimated "J".

- Target compound 2,4,6-trinitrotoluene exceeded the calibration range for samples 51SC27 (G9C240231-001), 51SC28 (G9C240231-002), 51SC29 (G9C240231-003), 51SC30 (G9C240231-004), 51SC32 (G9C240231-006), 51SC33 (G9C240231-007), 51SC34 (G9C240231-008), 51SC35 (G9C240231-009), 51SC36 (G9C240231-010), and 51SC38 (G9C240231-012). Target compound 2,4-dinitrotoluene exceeded the calibration range for sample 51SC36 (G9C240231-010). These data points were qualified rejected "R" for data usability. The second diluted run data reported should be used only for these compounds meeting this condition. There were no impacts to the data completeness.

- For samples 51SC34 (G9C240231-008DL), 51SC38 (G9C240231-012), and 51SC38 (G9C240231-012DL), 2-nitrotoluene and 4-nitrotoluene were outside confirmation criteria and was qualified estimated "J" for the associated samples. For all other explosive confirmations, all criteria were met.

**Sample: 51SC27 (G9C240231-001DL), 2,4,6-trinitrotoluene**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Vt = Volume of total extract (mL).
CF = Average relative calibration factor for compound being measured (from ICAL)
W(s) = Weight of sample in kilograms.
D = Percent dry weight (100 - % moisture in sample)/100 (Air dried =1.00)
DF = Dilution factor

Conc. µg/kg = (32190 * 80 * 5) / (89.04988 * 10.00 * 1.00) = 14459 µg/kg = 14 mg/kg
Reported Value = 14 mg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC27**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-001 | **Work Order #...:** | K826T1AA | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/26/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 19 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **4.4** | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.71** | **0.25** | **mg/kg** | **0.0073** |
| **Nitroglycerin** | **0.40 J** J | **0.50** | **mg/kg** | **0.015** |
| **2-Nitrotoluene** | **0.24 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.30 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **14 E** R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 115 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC27**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-001 | **Work Order #...:** | K826T2AA | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 5 | | | | |
| **% Moisture.....:** | 19 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **4.5** R | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **0.75 J** R | **1.2** | **mg/kg** | **0.036** |
| **Nitroglycerin** | **0.46 J** R | **2.5** | **mg/kg** | **0.075** |
| **2-Nitrotoluene** | **0.27 J** R | **1.2** | **mg/kg** | **0.065** |
| **4-Nitrotoluene** | **0.32 J** R | **2.5** | **mg/kg** | **0.091** |
| **2,4,6-Trinitrotoluene** | **14** | **1.2** | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 123 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC28**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-002 | **Work Order #...:** | K83CE1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 19 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **1.0** | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.39** | **0.25** | **mg/kg** | **0.0073** |
| **Nitroglycerin** | **0.17 J** J | **0.50** | **mg/kg** | **0.015** |
| **2-Nitrotoluene** | **0.11 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.12 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **16 E** R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 114 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC28**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-002 | **Work Order #...:** | K83CE2AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 5 | | | | |
| **% Moisture.....:** | 19 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **1.1 J** R | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **0.41 J** R | **1.2** | **mg/kg** | **0.036** |
| Nitroglycerin | ND R | 2.5 | mg/kg | 0.075 |
| 2-Nitrotoluene | ND R | 1.2 | mg/kg | 0.065 |
| 4-Nitrotoluene | ND R | 2.5 | mg/kg | 0.091 |
| **2,4,6-Trinitrotoluene** | **16** | **1.2** | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 121 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC29**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-003 | **Work Order #...:** | K83CF1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 20 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **1.0** | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.42** | **0.25** | **mg/kg** | **0.0073** |
| **Nitroglycerin** | **0.17 J** J | **0.50** | **mg/kg** | **0.015** |
| **2-Nitrotoluene** | **0.13 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.14 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **12 E** R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 113 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC29**

**HPLC**

**Lot-Sample #...:** G9C240231-003 **Work Order #...:** K83CF2AG **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**Prep Date.....:** 03/25/09 **Analysis Date..:** 03/27/09
**Prep Batch #...:** 9084493
**Dilution Factor:** 5
**% Moisture.....:** 20 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **1.0 J** R | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **0.44 J** R | **1.2** | **mg/kg** | **0.036** |
| Nitroglycerin | ND R | 2.5 | mg/kg | 0.075 |
| 2-Nitrotoluene | ND R | 1.2 | mg/kg | 0.065 |
| 4-Nitrotoluene | ND R | 2.5 | mg/kg | 0.091 |
| **2,4,6-Trinitrotoluene** | **12** | **1.2** | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 113 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC30

HPLC

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-004 | **Work Order #...:** | K83CG1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 19 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **2.8** | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.27** | **0.25** | **mg/kg** | **0.0072** |
| **Nitroglycerin** | **0.12 J** J | **0.50** | **mg/kg** | **0.015** |
| **2-Nitrotoluene** | **0.095 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.10 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **10 E** R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 105 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC30**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-004 | **Work Order #...:** | K83CG2AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 4.99 | | | | |
| **% Moisture.....:** | 19 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **2.9** | R | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **0.28 J** | R | **1.2** | **mg/kg** | **0.036** |
| Nitroglycerin | ND | R | 2.5 | mg/kg | 0.075 |
| 2-Nitrotoluene | ND | R | 1.2 | mg/kg | 0.065 |
| 4-Nitrotoluene | ND | R | 2.5 | mg/kg | 0.091 |
| **2,4,6-Trinitrotoluene** | **11** | | **1.2** | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND | R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 108 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC31**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-005 | **Work Order #...:** | K83CH1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 18 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **1.2** | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.38** | **0.25** | **mg/kg** | **0.0072** |
| **Nitroglycerin** | **0.096 J** J | **0.50** | **mg/kg** | **0.015** |
| **2-Nitrotoluene** | **0.22 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.18 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **7.3** | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 93 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC32

HPLC

| | | |
|---|---|---|
| Lot-Sample #...: G9C240231-006 | Work Order #...: K83CJ1AG | Matrix.....: SO |
| Date Sampled...: 03/23/09 | Date Received..: 03/24/09 | |
| Prep Date.....: 03/25/09 | Analysis Date..: 03/27/09 | |
| Prep Batch #...: 9084493 | | |
| Dilution Factor: 1 | | |
| % Moisture.....: 18 | Method.....: SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 1.7 | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 0.60 | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | 0.28 J J | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.18 J J | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.20 J J | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 16 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 121 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC32**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-006 | **Work Order #...:** | K83CJ2AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 5 | | | | |
| **% Moisture.....:** | 18 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **1.8** R | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **0.60 J** R | **1.2** | **mg/kg** | **0.036** |
| **Nitroglycerin** | **0.31 J** R | **2.5** | **mg/kg** | **0.075** |
| **2-Nitrotoluene** | **0.21 J** R | **1.2** | **mg/kg** | **0.065** |
| **4-Nitrotoluene** | **0.21 J** R | **2.5** | **mg/kg** | **0.091** |
| **2,4,6-Trinitrotoluene** | **16** | **1.2** | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 122 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC33**

**HPLC**

| | | |
|---|---|---|
| **Lot-Sample #...:** G9C240231-007 | **Work Order #...:** K83CK1AG | **Matrix.....:** SO |
| **Date Sampled...:** 03/23/09 | **Date Received..:** 03/24/09 | |
| **Prep Date.....:** 03/25/09 | **Analysis Date..:** 03/27/09 | |
| **Prep Batch #...:** 9084493 | | |
| **Dilution Factor:** 0.99 | | |
| **% Moisture.....:** 17 | **Method.....:** SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **2.8** | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.77** | **0.25** | **mg/kg** | **0.0072** |
| **Nitroglycerin** | **0.19 J** J | **0.50** | **mg/kg** | **0.015** |
| **2-Nitrotoluene** | **0.28** | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.30 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **16 E** R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 102 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC33**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-007 | **Work Order #...:** | K83CK2AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 4.99 | | | | |
| **% Moisture.....:** | 17 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **2.9** R | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **0.77 J** R | **1.2** | **mg/kg** | **0.036** |
| Nitroglycerin | ND R | 2.5 | mg/kg | 0.075 |
| **2-Nitrotoluene** | **0.31 J** R | **1.2** | **mg/kg** | **0.065** |
| **4-Nitrotoluene** | **0.31 J** R | **2.5** | **mg/kg** | **0.091** |
| **2,4,6-Trinitrotoluene** | **16** | **1.2** | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 102 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC34**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-008 | **Work Order #...:** | K83CL1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 18 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **4.7** K | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.74** K | **0.25** | **mg/kg** | **0.0073** |
| **Nitroglycerin** | **0.19 J** K | **0.50** | **mg/kg** | **0.015** |
| **2-Nitrotoluene** | **0.19 J** K | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.20 J** K | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **13 E** R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 129 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC34**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-008 | **Work Order #...:** | K83CL2AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 5 | | | | |
| **% Moisture.....:** | 18 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **4.8** | R | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **0.78 J** | R | **1.2** | **mg/kg** | **0.036** |
| Nitroglycerin | ND | R | 2.5 | mg/kg | 0.075 |
| **2-Nitrotoluene** | **0.19 J,PG** | R | **1.2** | **mg/kg** | **0.065** |
| **4-Nitrotoluene** | **0.19 J,PG** | R | **2.5** | **mg/kg** | **0.091** |
| **2,4,6-Trinitrotoluene** | **14** | K | **1.2** | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND | R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 132 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC35**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-009 | **Work Order #...:** | K83CM1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 12 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **7.0** K | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **1.3** K | **0.25** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.40** K | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.61** K | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **11 E** R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 133 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC35**

**HPLC**

**Lot-Sample #...:** G9C240231-009 **Work Order #...:** K83CM2AG **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**Prep Date.....:** 03/25/09 **Analysis Date..:** 03/27/09
**Prep Batch #...:** 9084493
**Dilution Factor:** 5
**% Moisture.....:** 12 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **7.2** R | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **1.3** R | **1.2** | **mg/kg** | **0.036** |
| Nitroglycerin | ND R | 2.5 | mg/kg | 0.075 |
| **2-Nitrotoluene** | **0.41 J** R | **1.2** | **mg/kg** | **0.065** |
| **4-Nitrotoluene** | **0.62 J** R | **2.5** | **mg/kg** | **0.091** |
| **2,4,6-Trinitrotoluene** | **11** K | **1.2** | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 135 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC36**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-010 | **Work Order #...:** | K83CN1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 14 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **14 E R** | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **2.6 K** | **0.25** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.66 K** | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.93 K** | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **22 E R** | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 168 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC36**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-010 | **Work Order #...:** | K83CN2AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 4.99 | | | | |
| **% Moisture....:** | 14 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | 15 K | 1.2 | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | 2.7 R | 1.2 | **mg/kg** | **0.036** |
| Nitroglycerin | ND R | 2.5 | mg/kg | 0.075 |
| **2-Nitrotoluene** | 0.67 J R | 1.2 | **mg/kg** | **0.065** |
| **4-Nitrotoluene** | 0.96 J R | 2.5 | **mg/kg** | **0.091** |
| **2,4,6-Trinitrotoluene** | 23 K | 1.2 | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 172 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC37**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-011 | **Work Order #...:** | K83CP1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 12 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **5.0** | K | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **1.2** | K | **0.25** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.32** | K | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.49 J** | K | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **6.4** | K | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 130 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC38**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-012 | **Work Order #...:** | K83CQ1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 13 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **3.5** | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.83** | **0.25** | **mg/kg** | **0.0072** |
| **Nitroglycerin** | **0.85** | **0.50** | **mg/kg** | **0.015** |
| **2-Nitrotoluene** | **0.36 PG** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.43 J,PG** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **11 E** R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 125 | (81 - 127) |

**NOTE(S):**

PG The percent difference between the original and confirmation analyses is greater than 40%.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC38**

**HPLC**

| | | | |
|---|---|---|---|
| **Lot-Sample #...:** G9C240231-012 | **Work Order #...:** K83CQ2AG | **Matrix.....:** SO | |
| **Date Sampled...:** 03/23/09 | **Date Received..:** 03/24/09 | | |
| **Prep Date.....:** 03/25/09 | **Analysis Date..:** 03/28/09 | | |
| **Prep Batch #...:** 9084493 | | | |
| **Dilution Factor:** 4.99 | | | |
| **% Moisture.....:** 13 | **Method.....:** SW846 8330B | | |

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **3.6** | R | **1.2** | **mg/kg** | **0.026** |
| **2,6-Dinitrotoluene** | **0.86 J** | R | **1.2** | **mg/kg** | **0.036** |
| **Nitroglycerin** | **0.92 J** | R | **2.5** | **mg/kg** | **0.075** |
| **2-Nitrotoluene** | **0.39 J,PG** | R | **1.2** | **mg/kg** | **0.065** |
| **4-Nitrotoluene** | **0.45 J,PG** | R | **2.5** | **mg/kg** | **0.091** |
| **2,4,6-Trinitrotoluene** | **11** | K | **1.2** | **mg/kg** | **0.097** |
| 1,3-Dinitrobenzene | ND | R | 1.2 | mg/kg | 0.021 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 128 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC39**

**HPLC**

**Lot-Sample #...:** G9C240231-013 **Work Order #...:** K83CR1AG **Matrix.....:** SO
**Date Sampled...:** 03/23/09 **Date Received..:** 03/24/09
**Prep Date.....:** 03/25/09 **Analysis Date..:** 03/27/09
**Prep Batch #...:** 9084493
**Dilution Factor:** 0.99
**% Moisture.....:** 20 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **0.059 J** R | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **0.017 J** R | **0.25** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND R | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND R | 0.50 | mg/kg | 0.018 |
| **2,4,6-Trinitrotoluene** | **0.095 J** R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND R | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 80 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC39

HPLC

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-013 | **Work Order #...:** | K83CR2AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 04/03/09 | **Analysis Date..:** | 04/07/09 | | |
| **Prep Batch #...:** | 9093288 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 20 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **0.070 J** J | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.020 J** J | **0.25** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| **2,4,6-Trinitrotoluene** | **0.10 J** J | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 91 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC40**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-014 | **Work Order #...:** | K83CT1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 21 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **0.70** | **0.25** | **mg/kg** | **0.0053** |
| **2,6-Dinitrotoluene** | **0.23 J** J | **0.25** | **mg/kg** | **0.0073** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.057 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.078 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **0.66** | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 85 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 51SC41**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9C240231-015 | **Work Order #...:** | K83CV1AN | **Matrix.....:** | SO |
| **Date Sampled...:** | 03/23/09 | **Date Received..:** | 03/24/09 | | |
| **Prep Date.....:** | 03/25/09 | **Analysis Date..:** | 03/27/09 | | |
| **Prep Batch #...:** | 9084493 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 20 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **4.0** | **0.25** | **mg/kg** | **0.0052** |
| **2,6-Dinitrotoluene** | **1.5** | **0.25** | **mg/kg** | **0.0072** |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| **2-Nitrotoluene** | **0.082 J** J | **0.25** | **mg/kg** | **0.013** |
| **4-Nitrotoluene** | **0.12 J** J | **0.50** | **mg/kg** | **0.018** |
| **2,4,6-Trinitrotoluene** | **3.0** | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 98 | (81 - 127) |

**NOTE(S):**

J Estimated result. Result is less than RL.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Explosives
Test America Laboratories, Inc., SDG G9D080171

**DATE:** June 8, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on April 7, 2009. Solid samples were analyzed for explosives using USEPA SW-846 8330B. A total of fifteen solid samples (two diluted and three re-analysis samples included) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC42 | G9D080171-001 | 51SC46 | G9D080171-005DL |
| 51SC43 | G9D080171-002 | 51SC47 | G9D080171-006 |
| 51SC43 | G9D080171-002RE | 51SC48 | G9D080171-007 |
| 51SC44 | G9D080171-003 | 51SC49 | G9D080171-008 |
| 51SC44 | G9D080171-003RE | 51SC50 | G9D080171-009 |
| 51SC45 | G9D080171-004 | 51SC50 | G9D080171-009RE |
| 51SC45 | G9D080171-004DL | 51SC51 | G9D080171-010 |
| 51SC46 | G9D080171-005 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| X | | System Monitoring Compounds |
| | X | Laboratory Control Sample |
| X | | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. For samples 51SC43 (G9D080171-002), 51SC44 (G9D080171-003), and 51SC50 (G9D080171-009), the surrogate 3,4-dinitrotoluene was below criteria. Samples 51SC43 (G9D080171-002), 51SC44 (G9D080171-003), and 51SC50 (G9D080171-009RE) should be used and the other sample were rejected for data usability. There were no impacts to the data completeness. Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and 2,4,6-trinitrotoluene exceeded the calibration range for sample 51SC45 (G9D080171-004) and target compound 2,4,6-trinitrotoluene exceeded the calibration range for sample 51SC46 (G9D080171-005). These data points were qualified rejected "R" for data usability. The second diluted run data reported should be used only for these compounds meeting this condition. There were no impacts to the data completeness.

Eric Malarek, Chemist

6/8/09

Date

**RFAAP VALIDATION REPORT**
**EXPLOSIVES REVIEW**
**SDG G9D080171**

**I-Holding Times and Preservation**

The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, explosive compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 04/07/09, the coolers were received on by the primary laboratory (Test America) on 04/08/09 at 4.0°C, 4.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 04/07/09. For the solid samples, the samples for explosive were extracted on 04/09/09 (04/13/09 for samples 51SC43 (G9D080171-002RE), 51SC44 (G9D080171-003RE), and 51SC50 (G9D080171-009RE)). The samples were analyzed on 04/10/09 and 04/11/09 (04/14/09 and 04/15/09 for samples 51SC43 (G9D080171-002), 51SC44 (G9D080171-003), and 51SC50 (G9D080171-009)). Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**

The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. No contaminants should be present in the blanks. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5x) the maximum amount for explosive target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 04/10/09 | G9D090000-341 | All target explosives <½MRL | NA | NA | None |
| 04/14/09 | G9D130000-411 | All target explosives <½MRL | NA | NA | None |

MRL = Method Reporting Limit
NA = Not Applicable

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5-point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. The DoD QSM specifies that the correlation coefficient must be ≥0.995 and/or the percent relative standard deviation (%RSD) must be ≤20%. All detects were qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For the explosives initial calibration performed on 09/27/08 on instrument LC10.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Samples 51SC42 (G9D080171-001), 51SC43 (G9D080171-002), 51SC43 (G9D080171-002RE), 51SC44 (G9D080171-003), 51SC44 (G9D080171-003RE), 51SC45 (G9D080171-004), 51SC45 (G9D080171-004DL), 51SC46 (G9D080171-005), 51SC46 (G9D080171-005DL), 51SC47 (G9D080171-006), 51SC48 (G9D080171-007), 51SC49 (G9D080171-008), 51SC50 (G9D080171-009), 51SC50 (G9D080171-009RE), and 51SC51 (G9D080171-010) apply to this initial calibration.

- For the explosives initial calibration performed on 09/26/08 on instrument LC9.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Confirmations for samples 51SC42 (G9D080171-001), 51SC43 (G9D080171-002), 51SC43 (G9D080171-002RE), 51SC44 (G9D080171-003), 51SC44 (G9D080171-003RE), 51SC45 (G9D080171-004), 51SC45 (G9D080171-004DL), 51SC46 (G9D080171-005), 51SC46 (G9D080171-005DL), 51SC47 (G9D080171-006), 51SC48 (G9D080171-007), 51SC49 (G9D080171-008), 51SC50 (G9D080171-009), 51SC50 (G9D080171-009RE), and 51SC51 (G9D080171-010) apply to this initial calibration.

**IV-Continuing Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. Continuing calibration standards are analyzed after every 10 injections, and at the end of the analysis sequence. The DoD QSM specifies that the percent difference (%D) from initial calibration should be no greater than ±20%. All detects were qualified as estimated "J" for where there were exceeding %Ds, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For explosives initial calibration verification performed on 09/27/08 @21:28 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this initial verification calibration.

- For explosives continuing calibration performed on 04/10/09 @18:04 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC42 (G9D080171-001), 51SC43 (G9D080171-002), and 51SC44 (G9D080171-003) apply to this continuing calibration.

- For explosives continuing calibration performed on 04/11/09 @00:48 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC45 (G9D080171-004), 51SC46 (G9D080171-005), 51SC47 (G9D080171-006), 51SC48 (G9D080171-007), 51SC49 (G9D080171-008), 51SC50 (G9D080171-009), and 51SC51 (G9D080171-010) apply to this continuing calibration.

- For explosives continuing calibration performed on 04/11/09 @07:32 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 04/11/09 @13:54 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC45 (G9D080171-004DL) and 51SC46 (G9D080171-005DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 04/11/09 @18:57 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 04/14/09 @19:58 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC43 (G9D080171-002RE), 51SC44 (G9D080171-003RE), and 51SC50 (G9D080171-009RE) apply to this continuing calibration.

- For explosives continuing calibration performed on 04/15/09 @03:33 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives initial calibration verification performed on 09/27/08 @14:26 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No soil samples reported or confirmations apply to this initial verification calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 04/10/09 @18:05 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC42 (G9D080171-001) and 51SC43 (G9D080171-002) apply to this continuing calibration.

- For explosives continuing calibration performed on 04/11/09 @03:34 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC44 (G9D080171-003), 51SC45 (G9D080171-004), 51SC46 (G9D080171-005), 51SC47 (G9D080171-006), 51SC48 (G9D080171-007), 51SC49 (G9D080171-008), 51SC50 (G9D080171-009), and 51SC51 (G9D080171-010) apply to this continuing calibration.

- For explosives continuing calibration performed on 04/11/09 @14:14 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC45 (G9D080171-004DL) and 51SC46 (G9D080171-005DL) apply to this continuing calibration.

- For explosives continuing calibration performed on 04/11/09 @21:31 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples or confirmations reported apply to this continuing calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 04/14/09 @20:21 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC43 (G9D080171-002RE), 51SC44 (G9D080171-003RE), and 51SC50 (G9D080171-009RE) apply to this continuing calibration.

- For explosives continuing calibration performed on 04/15/09 @01:33 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples or confirmations reported apply to this continuing calibration; therefore, no qualifiers were applied.

**V-System Monitoring Compound (Surrogates)**
Laboratory performance on individual samples is established by means of spiking activities. The percent recovery (%R) for all samples and blanks must be within the laboratory control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria: 3,4-dinitrotoluene (81-127%)

- For sample 51SC43 (G9D080171-002), the surrogate 3,4-dinitrotoluene (76%) was outside criteria. The sample was re-extracted as 51SC43 (G9D080171-002RE) with the surrogate also recovering outside criteria at 76%. The original sample should be used with all detects qualified estimated low "L" and non-detects "UL" based upon the low recovery. The re-analysis sample was therefore rejected "R" based upon sample usability. There were no impacts to the data completeness.

- For sample 51SC44 (G9D080171-003), the surrogate 3,4-dinitrotoluene (69%) was outside criteria. The sample was re-extracted as 51SC44 (G9D080171-003RE) with the surrogate also recovering outside criteria at 79%. The original sample should be used with all detects qualified estimated low "L" and non-detects "UL" based upon the low recovery. The re-analysis sample was therefore rejected "R" based upon sample usability. There were no impacts to the data completeness.

- For sample 51SC45 (G9D080171-004), the surrogate 3,4-dinitrotoluene (594%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC45 (G9D080171-004DL), the surrogate 3,4-dinitrotoluene was diluted out. No qualifiers were applied based upon this outlier.

- For sample 51SC46 (G9D080171-005), the surrogate 3,4-dinitrotoluene (906%) was outside criteria. All detects were qualified estimated high "K" and non-detects no qualifier based upon this outlier.

- For sample 51SC46 (G9D080171-005DL), the surrogate 3,4-dinitrotoluene was diluted out. No qualifiers were applied based upon this outlier.

- For sample 51SC50 (G9D080171-009), the surrogate 3,4-dinitrotoluene (69%) was outside criteria. The sample was re-extracted as 51SC50 (G9D080171-009RE) with the surrogate recovering within criteria at 82%. The re-analysis sample should be used with no qualification required. The original sample was therefore rejected "R" based upon sample usability. There were no impacts to the data completeness.

- For all other samples, all criteria were met.

**VI-Laboratory Control Sample**
Laboratory control samples (LCS) are used to monitor long-term accuracy of the analytical method. The analysis is performed at a frequency of 1 per analytical batch. The percent recoveries (%Rs) must be within the laboratory control limits. DoD QSM solid LCS recovery limits are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9D090000-341 was used as solid LCS for explosives analyzed on 04/10/09. All criteria were met. No qualifiers were applied. Samples 51SC42 (G9D080171-001), 51SC43 (G9D080171-002), 51SC44 (G9D080171-003), 51SC45 (G9D080171-004), 51SC45 (G9D080171-004DL), 51SC46 (G9D080171-005), 51SC46 (G9D080171-005DL), 51SC47 (G9D080171-006), 51SC48 (G9D080171-007), 51SC49 (G9D080171-008), 51SC50 (G9D080171-009), and 51SC51 (G9D080171-010) apply to this LCS.

- Sample G9D130000-411 was used as solid LCS for explosives analyzed on 04/14/09. All criteria were met. No qualifiers were applied. Samples 51SC43 (G9D080171-002RE), 51SC44 (G9D080171-003RE), and 51SC50 (G9D080171-009RE) apply to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the laboratory control limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 51SC42 (G9D080171-001) was used as the solid MS/MSD for the explosive analysis on 04/10/09. 1,3-Dinitrobenzene (78%), 2,4-dinitrotoluene (73%), and 2,6-dinitrotoluene (73%) were outside DoD QSM criteria and/or laboratory criteria. The spiked sample was qualified estimated "L" for detects and "UL" for non-detects for 1,3-dinitrobenzene, 2,4-dinitrotoluene, and 2,6-dinitrotoluene based upon the low recoveries. The associated LCS (Section VI) was within criteria. Samples 51SC42 (G9D080171-001), 51SC43 (G9D080171-002), 51SC44 (G9D080171-003), 51SC45 (G9D080171-004), 51SC45 (G9D080171-004DL), 51SC46 (G9D080171-005), 51SC46 (G9D080171-005DL), 51SC47 (G9D080171-006), 51SC48 (G9D080171-007), 51SC49 (G9D080171-008), 51SC50 (G9D080171-009), and 51SC51 (G9D080171-010) apply to this MS/MSD.

- Sample 51SC43 (G9D080171-002RE) was used as the solid MS/MSD for the explosive analysis on 04/15/09. 1,3-Dinitrobenzene (72%, 79%), 2,4-dinitrotoluene (72%, 77%), 2,6-dinitrotoluene (71%, 77%), and 2-nitrotoluene (76%) were outside DoD QSM criteria and/or laboratory criteria. The spiked sample was qualified estimated "L" for detects and "UL" for non-detects for 1,3-dinitrobenzene, 2,4-dinitrotoluene, 2,6-dinitrotoluene, and 2-nitrotoluene based upon the low recoveries. The associated LCS (Section VI) was within criteria. Samples 51SC43 (G9D080171-002RE), 51SC44 (G9D080171-003RE), and 51SC50 (G9D080171-009RE) apply to this MS/MSD.

**VIII-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**IX-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The calculation was based calibration factors. The absolute percent difference (%D) between the calculated and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns.

- All values >MDL and <MRL or <3*MDL (whichever was greater) were qualified as estimated "J".

- Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and 2,4,6-trinitrotoluene exceeded the calibration range for sample 51SC45 (G9D080171-004) and target compound 2,4,6-trinitrotoluene exceeded the calibration range for sample 51SC46 (G9D080171-005). These data points were qualified rejected "R" for data usability. The second diluted run data reported should be used only for these compounds meeting this condition. There were no impacts to the data completeness.

- For samples 51SC43 (G9D080171-002RE) and 51SC47 (G9D080171-006), 2,6-dinitrotoluene were outside confirmation criteria and was qualified estimated "J" for the associated samples. For all other explosive confirmations, all criteria were met.

**Sample: 51SC42 (G9D080171-001), 2,4,6-trinitrotoluene**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Vt = Volume of total extract (mL).
CF = Average relative calibration factor for compound being measured (from ICAL)
W(s) = Weight of sample in kilograms.
D = Percent dry weight (100 - % moisture in sample)/100 (Air dried =1.00)
DF = Dilution factor

Conc. µg/kg = (5574 * 80 * 1) / (89.04988 * 10.00 * 1.00) = 500.75 µg/kg = 0.50 mg/kg
Reported Value = 0.50 mg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC42

HPLC

Lot-Sample #...: G9D080171-001 Work Order #...: K9Q2C1AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/09/09 Analysis Date..: 04/10/09
Prep Batch #...: 9099341
Dilution Factor: 1 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.19 J L | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 0.10 J L | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.50 J | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND VL | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 87 | (81 - 127) |

NOTE(S):

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC43

HPLC

| | | | |
|---|---|---|---|
| Lot-Sample #...: G9D080171-002 | Work Order #...: K9Q2G1AA | Matrix.....: SO | |
| Date Sampled...: 04/07/09 | Date Received..: 04/08/09 | | |
| Prep Date.....: 04/09/09 | Analysis Date..: 04/10/09 | | |
| Prep Batch #...: 9099341 | | | |
| Dilution Factor: 0.99 | Method.....: SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.042 J J | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.016 J J | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.072 J J | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 76 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC43

HPLC

| | | |
|---|---|---|
| Lot-Sample #...: G9D080171-002 | Work Order #...: K9Q2G2AA | Matrix.....: SO |
| Date Sampled...: 04/07/09 | Date Received..: 04/08/09 | |
| Prep Date.....: 04/13/09 | Analysis Date..: 04/14/09 | |
| Prep Batch #...: 9103411 | | |
| Dilution Factor: 0.99 | Method.....: SW846 8330B | |

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.042 J | R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.015 J,PG | R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | R | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.060 J | R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | R | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 76 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC44

HPLC

Lot-Sample #...: G9D080171-003 Work Order #...: K9Q2J1AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/09/09 Analysis Date..: 04/10/09
Prep Batch #...: 9099341
Dilution Factor: 0.99 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **0.025 J** J | **0.25** | **mg/kg** | **0.0052** |
| 2,6-Dinitrotoluene | ND | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| **2,4,6-Trinitrotoluene** | **0.14 J** J | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 69 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC44

HPLC

Lot-Sample #...: G9D080171-003 Work Order #...: K9Q2J2AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/13/09 Analysis Date..: 04/15/09
Prep Batch #...: 9103411
Dilution Factor: 0.99 Method.....: SW846 8330B

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **0.030 J** | R | **0.25** | **mg/kg** | **0.0052** |
| 2,6-Dinitrotoluene | ND | R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | R | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | R | 0.50 | mg/kg | 0.018 |
| **2,4,6-Trinitrotoluene** | **0.17 J** | R | **0.25** | **mg/kg** | **0.019** |
| 1,3-Dinitrobenzene | ND | R | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 79 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC45

HPLC

Lot-Sample #...: G9D080171-004 Work Order #...: K9Q2L1AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/09/09 Analysis Date..: 04/11/09
Prep Batch #...: 9099341
Dilution Factor: 0.99 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 36 E R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 14 E R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 3.8 | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 2.8 | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 110 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | 0.030 J J | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 594 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC45

HPLC

Lot-Sample #...: G9D080171-004 Work Order #...: K9Q2L2AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/09/09 Analysis Date..: 04/11/09
Prep Batch #...: 9099341
Dilution Factor: 19.98 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 37 | 5.0 | mg/kg | 0.11 |
| 2,6-Dinitrotoluene | 15 | 5.0 | mg/kg | 0.15 |
| Nitroglycerin | ND R | 10 | mg/kg | 0.30 |
| 2-Nitrotoluene | 3.8 J R | 5.0 | mg/kg | 0.26 |
| 4-Nitrotoluene | 2.6 J R | 10 | mg/kg | 0.36 |
| 2,4,6-Trinitrotoluene | 120 | 5.0 | mg/kg | 0.39 |
| 1,3-Dinitrobenzene | ND R | 5.0 | mg/kg | 0.084 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC46

HPLC

Lot-Sample #...: G9D080171-005 Work Order #...: K9Q2M1AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/09/09 Analysis Date..: 04/11/09
Prep Batch #...: 9099341
Dilution Factor: 1 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 2.9 | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 6.0 | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | 4.0 | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.60 J | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 1.2 J | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 250 E R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 906 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits

E Estimated result. Result concentration exceeds the calibration range.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC46

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9D080171-005 | Work Order #...: | K9Q2M2AA | Matrix.....: | SO |
| Date Sampled...: | 04/07/09 | Date Received..: | 04/08/09 | | |
| Prep Date.....: | 04/09/09 | Analysis Date..: | 04/11/09 | | |
| Prep Batch #...: | 9099341 | | | | |
| Dilution Factor: | 200.2 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 3.5 J R | 50 | mg/kg | 1.1 |
| 2,6-Dinitrotoluene | 6.8 J R | 50 | mg/kg | 1.5 |
| Nitroglycerin | ND R | 100 | mg/kg | 3.0 |
| 2-Nitrotoluene | ND R | 50 | mg/kg | 2.6 |
| 4-Nitrotoluene | ND R | 100 | mg/kg | 3.6 |
| 2,4,6-Trinitrotoluene | 870 | 50 | mg/kg | 3.9 |
| 1,3-Dinitrobenzene | ND R | 50 | mg/kg | 0.84 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

* Surrogate recovery is outside stated control limits.

J Estimated result Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC47

HPLC

| | | | |
|---|---|---|---|
| Lot-Sample #...: G9D080171-006 | Work Order #...: K9Q2P1AA | Matrix.....: SO | |
| Date Sampled...: 04/07/09 | Date Received..: 04/08/09 | | |
| Prep Date.....: 04/09/09 | Analysis Date..: 04/11/09 | | |
| Prep Batch #...: 9099341 | | | |
| Dilution Factor: 1 | Method.....: SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.021 J | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 0.022 J,PG | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.57 | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 83 | (81 - 127) |

NOTE(S):

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC48

HPLC

Lot-Sample #...: G9D080171-007 Work Order #...: K9Q2R1AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/09/09 Analysis Date..: 04/11/09
Prep Batch #...: 9099341
Dilution Factor: 0.99 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.087 J J | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.044 J J | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.091 J J | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 83 | (81 - 127) |

NOTE(S):

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC49

HPLC

Lot-Sample #...: G9D080171-008 Work Order #...: K9Q2T1AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/09/09 Analysis Date..: 04/11/09
Prep Batch #...: 9099341
Dilution Factor: 0.99 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.096 J J | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.053 J J | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 2.0 | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 89 | (81 - 127) |

NOTE(S):

J Estimated result. Result is less than RL

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC50

HPLC

| | | |
|---|---|---|
| Lot-Sample #...: G9D080171-009 | Work Order #...: K9Q2W1AA | Matrix.....: SO |
| Date Sampled...: 04/07/09 | Date Received..: 04/08/09 | |
| Prep Date.....: 04/09/09 | Analysis Date..: 04/11/09 | |
| Prep Batch #...: 9099341 | | |
| Dilution Factor: 0.99 | Method.....: SW846 8330B | |

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.030 J | R | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.014 J | R | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | R | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.22 J | R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | R | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 69 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC50

HPLC

Lot-Sample #...: G9D080171-009 Work Order #...: K9Q2W2AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/13/09 Analysis Date..: 04/15/09
Prep Batch #...: 9103411
Dilution Factor: 0.99 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.025 J J | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.012 J J | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.24 J J | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 82 | (81 - 127) |

NOTE(S):

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC51

HPLC

Lot-Sample #...: G9D080171-010 Work Order #...: K9Q201AA Matrix.....: SO
Date Sampled...: 04/07/09 Date Received..: 04/08/09
Prep Date.....: 04/09/09 Analysis Date..: 04/11/09
Prep Batch #...: 9099341
Dilution Factor: 1 Method.....: SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrotoluene | 3.3 | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 0.66 J | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.12 J J | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.11 J J | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 3.8 | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 114 | (81 - 127) |

NOTE(S):

J Estimated result Result is less than RL.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Explosives
Test America Laboratories, Inc., SDG G9E060194

**DATE:** June 15, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at collected at Main Manufacturing Area at RFAAP for SWMU51 Removal Action on May 5, 2009. Solid samples were analyzed for explosives using USEPA SW-846 8330B. A total of four solid samples (two re-analysis samples included) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 51SC52 | G9E060194-001 | 51SC53 | G9E060194-002 |
| 51SC52 | G9E060194-001RE | 51SC53 | G9E060194-002RE |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| X | | System Monitoring Compounds |
| | X | Laboratory Control Sample |
| X | | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. For samples 51SC52 (G9E060194-001), 51SC52 (G9E060194-001RE), 51SC53 (G9E060194-002), and 51SC53 (G9E060194-002RE), the surrogate 3,4-dinitrotoluene was below criteria. Samples 51SC52 (G9E060194-001) and 51SC53 (G9E060194-002) should be used and the other re-analysis sample were rejected for data usability. There were no impacts to the data completeness.

Eric Malarek, Chemist

6/15/09
Date

**RFAAP VALIDATION REPORT**
**EXPLOSIVES REVIEW**
**SDG G9E060194**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, explosive compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 05/05/09, the coolers were received on by the primary laboratory (Test America) on 05/06/09 at 3.0°C, 6.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 05/05/09. For the solid samples, the samples for explosive were extracted on 05/07/09 (05/11/09 for samples 51SC52 (G9E060194-001RE) and 51SC53 (G9E060194-002RE)). The samples were analyzed on 05/08/09 (05/14/09 for samples 51SC52 (G9E060194-001RE) and 51SC53 (G9E060194-002RE)). Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**
The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. No contaminants should be present in the blanks. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5x) the maximum amount for explosive target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 05/08/09 | G9E070000-441 | All target explosives <½MRL | NA | NA | None |
| 05/14/09 | G9E110000-492 | All target explosives <½MRL | NA | NA | None |

MRL = Method Reporting Limit
NA = Not Applicable

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5-point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. The DoD QSM specifies that the correlation coefficient must be ≥0.995 and/or the percent relative standard deviation (%RSD) must be ≤20%. All detects were qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For the explosives initial calibration performed on 09/27/08 on instrument LC10.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Samples 51SC52 (G9E060194-001), 51SC52 (G9E060194-001RE), 51SC53 (G9E060194-002), and 51SC53 (G9E060194-002RE) apply to this initial calibration.

- For the explosives initial calibration performed on 09/26/08 on instrument LC9.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Confirmations for samples 51SC52 (G9E060194-001), 51SC52 (G9E060194-001RE), 51SC53 (G9E060194-002), and 51SC53 (G9E060194-002RE) apply to this initial calibration.

**IV-Continuing Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. Continuing calibration standards are analyzed after every 10 injections, and at the end of the analysis sequence. The DoD QSM specifies that the percent difference (%D) from initial calibration should be no greater than ±20%. All detects were qualified as estimated "J" for where there were exceeding %Ds, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For explosives initial calibration verification performed on 09/27/08 @21:28 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this initial verification calibration.

- For explosives continuing calibration performed on 05/08/09 @17:07 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC52 (G9E060194-001) and 51SC53 (G9E060194-002) apply to this continuing calibration.

- For explosives continuing calibration performed on 05/09/09 @00:19 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives continuing calibration performed on 05/14/09 @10:36 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 51SC52 (G9E060194-001RE) and 51SC53 (G9E060194-002RE) apply to this continuing calibration.

- For explosives continuing calibration performed on 05/14/09 @16:29 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No soil samples reported apply to this continuing calibration.

- For explosives initial calibration verification performed on 09/27/08 @14:26 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No soil samples reported or confirmations apply to this initial verification calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 05/08/09 @20:28 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC52 (G9E060194-001) and 51SC53 (G9E060194-002) apply to this continuing calibration.

- For explosives continuing calibration performed on 05/09/09 @06:52 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No soil samples reported or confirmations apply to this continuing calibration; therefore, no qualifiers were applied.

- For explosives continuing calibration performed on 05/14/09 @11:13 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied. Sample confirmations for 51SC52 (G9E060194-001RE) and 51SC53 (G9E060194-002RE) apply to this continuing calibration.

- For explosives continuing calibration performed on 05/14/09 @15:21 on instrument LC9.i, 4-nitrotoluene (-100%) was outside criteria. For all other target compounds, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied.

**V-System Monitoring Compound (Surrogates)**
Laboratory performance on individual samples is established by means of spiking activities. The percent recovery (%R) for all samples and blanks must be within the laboratory control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria: 3,4-dinitrotoluene (81-127%)

- For sample 51SC52 (G9E060194-001), the surrogate 3,4-dinitrotoluene (76%) was outside criteria. The sample was re-extracted as 51SC52 (G9E060194-001RE) with the surrogate also recovering outside criteria at 73%. The original sample should be used with all detects qualified estimated low "L" and non-detects "UL" based upon the low recovery. The re-analysis sample was therefore rejected "R" based upon sample usability. There were no impacts to the data completeness.

- For sample 51SC53 (G9E060194-002), the surrogate 3,4-dinitrotoluene (65%) was outside criteria. The sample was re-extracted as 51SC53 (G9E060194-002RE) with the surrogate also recovering outside criteria at 77%. The original sample should be used with all detects qualified estimated low "L" and non-detects "UL" based upon the low recovery. The re-analysis sample was therefore rejected "R" based upon sample usability. There were no impacts to the data completeness.

**VI-Laboratory Control Sample**
Laboratory control samples (LCS) are used to monitor long-term accuracy of the analytical method. The analysis is performed at a frequency of 1 per analytical batch. The percent recoveries (%Rs) must be within the laboratory control limits. DoD QSM solid LCS recovery limits are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9E070000-441 was used as solid LCS for explosives analyzed on 05/08/09. All criteria were met. No qualifiers were applied. Samples 51SC52 (G9E060194-001) and 51SC53 (G9E060194-002) apply to this LCS.

- Sample G9E110000-492 was used as solid LCS for explosives analyzed on 05/14/09. All criteria were met. No qualifiers were applied. Samples 51SC52 (G9E060194-001RE) and 51SC53 (G9E060194-002RE) apply to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the laboratory control limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 51SC52 (G9E060194-001) was used as the solid MS/MSD for the explosive analysis on 05/08/09. 1,3-Dinitrobenzene (77%, 71%), 2,4-dinitrotoluene (69%), 2,6-dinitrotoluene (76%, 69%), 2-nitrotoluene (78%), and nitroglycerin (72%) were outside DoD QSM criteria and/or laboratory criteria. The spiked sample was qualified estimated "L" for detects and "UL" for non-detects for 1,3-dinitrobenzene, 2,4-dinitrotoluene, 2,6-dinitrotoluene, 2-nitrotoluene, and nitroglycerin based upon the low recoveries. The associated LCS (Section VI) was within criteria. Samples 51SC52 (G9E060194-001) and 51SC53 (G9E060194-002) apply to this MS/MSD.

- Sample 51SC52 (G9E060194-001RE) was used as the solid MS/MSD for the explosive analysis on 05/14/09. 1,3-Dinitrobenzene (67%, 72%), 2,4-dinitrotoluene (62%, 70%), 2,6-dinitrotoluene (65%, 69%), 2-nitrotoluene (72%, 74%), 4-nitrotoluene (70%, 73%), 2,4,6-trinitrotoluene (13%, 0.0%), and nitroglycerin (66%) were outside DoD QSM criteria and/or laboratory criteria. The spiked sample was qualified estimated "L" for detects and "UL" for non-detects for 1,3-dinitrobenzene, 2,4-dinitrotoluene, 2,6-dinitrotoluene, 2-nitrotoluene, 4-nitrotoluene, 2,4,6-trinitrotoluene, and nitroglycerin based upon the low recoveries. The associated LCS (Section VI) was within criteria. Samples 51SC52 (G9E060194-001RE) and 51SC53 (G9E060194-002RE) apply to this MS/MSD.

**VIII-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**IX-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The calculation was based calibration factors. The absolute percent difference (%D) between the calculated and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns.

- All values >MDL and <MRL or <3*MDL (whichever was greater) were qualified as estimated "J".

- All confirmation criteria were met. No qualifiers were applied.

**Sample: 51SC52 (G9E060194-001), 2,4,6-trinitrotoluene**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Vt = Volume of total extract (mL).
CF = Average relative calibration factor for compound being measured (from ICAL)
W(s) = Weight of sample in kilograms.
D = Percent dry weight (100 - % moisture in sample)/100 (Air dried =1.00)
DF = Dilution factor

Conc. µg/kg = (3000 * 80 * 1) / (89.04988 * 10.01 * 0.99) = 271.96 µg/kg = 0.27 mg/kg
Reported Value = 0.27 mg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC52

HPLC

Lot-Sample #...: G9E060194-001 Work Order #...: LCFEL1AA Matrix.....: SO
Date Sampled...: 05/05/09 Date Received..: 05/06/09
Prep Date.....: 05/07/09 Analysis Date..: 05/08/09
Prep Batch #...: 9127441
Dilution Factor: 0.99 Method.....: SW846 8330B

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.22 J | L | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | 0.063 J | L | 0.25 | mg/kg | 0.0072 |
| Nitroglycerin | ND | VL | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | VL | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | VL | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.27 | L | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | VL | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 72 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits

J Estimated result Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC52

HPLC

| | | |
|---|---|---|
| Lot-Sample #...: G9E060194-001 | Work Order #...: LCFEL2AA | Matrix.....: SO |
| Date Sampled...: 05/05/09 | Date Received..: 05/06/09 | |
| Prep Date.....: 05/11/09 | Analysis Date..: 05/14/09 | |
| Prep Batch #...: 9131492 | | |
| Dilution Factor: 1 | Method.....: SW846 8330B | |

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.27 | R | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 0.084 J | R | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | ND | R | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.025 J | R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.036 J | R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.88 | R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | R | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 73 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC53

HPLC

Lot-Sample #...: G9E060194-002 Work Order #...: LCFEN1AA Matrix.....: SO
Date Sampled...: 05/05/09 Date Received..: 05/06/09
Prep Date.....: 05/07/09 Analysis Date..: 05/08/09
Prep Batch #...: 9127441
Dilution Factor: 1 Method.....: SW846 8330B

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.25 | L | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 0.12 J | L | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | ND | VL | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.040 J | L | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.050 J | L | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 0.89 | L | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | VL | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 65 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 51SC53

HPLC

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9E060194-002 | Work Order #...: | LCFEN2AA | Matrix.....: | SO |
| Date Sampled...: | 05/05/09 | Date Received..: | 05/06/09 | | |
| Prep Date.....: | 05/11/09 | Analysis Date..: | 05/14/09 | | |
| Prep Batch #...: | 9131492 | | | | |
| Dilution Factor: | 1 | Method.....: | SW846 8330B | | |

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| 2,4-Dinitrotoluene | 0.33 | R | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | 0.17 J | R | 0.25 | mg/kg | 0.0073 |
| Nitroglycerin | ND | R | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | 0.065 J | R | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | 0.086 J | R | 0.50 | mg/kg | 0.018 |
| 2,4,6-Trinitrotoluene | 1.0 | R | 0.25 | mg/kg | 0.019 |
| 1,3-Dinitrobenzene | ND | R | 0.25 | mg/kg | 0.0042 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 77 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

# Appendix B-3

# Chains of Custody

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw Environmental | JEFF PARK 123461.40000002 | 12/30/08 | 176796 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page _____ of _____** |
| 2113 Emmorton Park Rd. | 410 612 6322 | | |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | |
| Edgewood / Md / 21040 | ERIC MALAREK | LINDA LAVER | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| RAAP SLOMIL 51 RADFORD, VA. | | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Analysis: TCLP | 2,4-DNT | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51DW02 (3 bottles) | 12/30/08 | 10:30 | | | | ✓ | ✓ | | | | | | ✓ | ✓ | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By: SK mtal | 12/30/08 | 11:30AM | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments
Analysis by USEPA 1311/3510C/8270C TEMP BLANK INSIDE

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw ENVIRONMENTAL | Project Manager: JEFF PARK 1234161 4500000002 | Date: 1/9/09 | Chain of Custody Number: 106835 |
| Address: 2113 EMMORTON PARK Rd. | Telephone Number (Area Code)/Fax Number: 410 612 6322 | Lab Number | Page _____ of _____ |
| City: Edgewood / State: MD / Zip Code: 21040 | Site Contact: ERIC MILLARKER | Lab Contact: LINDA LAVER | |
| Project Name and Location (State): RAAP SWMU 51 RADFORD, Va. | Carrier/Waybill Number | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Analysis: TAL METALS (ICP) | TCL VOCs | TCL SVOCs | PCBs 8082 | TCL VOCs | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51DW05 | 1/9/09 | 9:30 | | | | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 51DW06 | 1/9/09 | 10:00 | | | | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | | | | |
|---|---|---|---|---|
| 1. Relinquished By: Stan Kuntal | Date: 1/9/09 | Time: 12:00 | 1. Received By | Date / Time |
| 2. Relinquished By | Date | Time | 2. Received By | Date / Time |
| 3. Relinquished By | Date | Time | 3. Received By | Date / Time |

Comments: Temp. Blank Inside

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E & I | Project Manager: Jeff Park 1234101 4D0002002 | Date: 2/16/09 | Chain of Custody Number: 17794 |
| Address: 2113 Emmerton Park Rd. | Telephone Number (Area Code)/Fax Number: 410-612-6322 | Lab Number: | Page _____ of _____ |
| City: Edgewood / State: Md. / Zip Code: 21040 | Site Contact: Eric Mallavek | Lab Contact: Linda Laver | |
| Project Name and Location (State): RAAP-SWMU51 Radford, Va. | Carrier/Waybill Number: UPS | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Analysis: TAL METALS | TCL SVOC | TCL PEST | TCL PCB's | Explosives | TCL VOC's |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JWB-GF01 (3 bottles: 3 encores) | 2/16/09 | 12:00 | | | | X | X | | | | | | X | X | X | X | X | X |
| JWB-GF02 (3 bottles: 3 encores) | 2/16/09 | 1:00 | | | | X | X | | | | | | X | X | X | X | X | X |
| ~~SB01~~ 51DW05A | 2/16/09 | 1:45 | | | | X | X | | | | | | | | | | | X |
| 51DW06A (3 encores each) | 2/16/09 | 2:15 | | | | X | X | | | | | | | | | | | X |

Special Instructions/ Conditions of Receipt

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | | |
|---|---|---|
| 1. Relinquished By: Laura Knitak | Date: 2/16/09 | Time: 3:00PM |
| 2. Relinquished By | Date: | Time: |
| 3. Relinquished By | Date: | Time: |

| | | |
|---|---|---|
| 1. Received By | Date: | Time: |
| 2. Received By | Date: | Time: |
| 3. Received By | Date: | Time: |

Comments: TEMP Blank Inside, Per Shaw contract

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☑

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw E&I | Tim Leahy | 3/4/09 | 107955 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | |
| 2113 Emerald Park Rd | 410 612 6357 / 410 612-6351 | | **Page** 1 **of** _____ |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | |
| Edgewood / MD / 21040 | Steve Kulak | | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| RFAAP - SWMU 51, VA | UPS / 1Z 218 842 33 23 | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Analysis (Attach list if more space is needed): Explosives (8330) | Explosives (8330) Lead | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51SC01 | 3/4/09 | 13:00 | | | | X | X | | | | | | X | X | |
| 51SC02 | | 13:05 | | | | X | X | | | | | | X | X | |
| 51SC03 | | 13:10 | | | | X | X | | | | | | X | X | |
| 51SC04 | | 13:15 | | | | X | X | | | | | | X | X | |
| 51SC05 | | 13:20 | | | | X | X | | | | | | X | X | |
| 51SC06 | | 13:25 | | | | X | X | | | | | | X | X | |
| 51SC07 | | 13:30 | | | | X | X | | | | | | X | X | |
| 51SC08 | | 13:35 | | | | X | X | | | | | | X | X | |
| 51SC09 | | 13:40 | | | | X | X | | | | | | X | X | |
| 51SC10 | | 13:45 | | | | X | X | | | | | | X | X | |
| 51SC11 | | 13:50 | | | | X | X | | | | | | X | X | |
| 51SC12 | | 13:55 | | | | X | X | | | | | | X | X | |

**Possible Hazard Identification**

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

**Sample Disposal**

☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☑ Other 72 hrs

**QC Requirements (Specify)**

| | Date | Time |
|---|---|---|
| 1. Relinquished By | 3/4/09 | 16:00 |
| 2. Relinquished By | | |
| 3. Relinquished By | | |
| Comments | | |

| | Date | Time |
|---|---|---|
| 1. Received By | | |
| 2. Received By | | |
| 3. Received By | | |

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☑

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw E&I | Tim Leahy | 3/4/09 | 107956 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 2 of** |
| 2113 Emmorton Park Rd | 410 612 6357 / 410 612-6351 | | |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | **Analysis (Attach list if more space is needed)** |
| Edgewood / MD / 21040 | Steve Kerbek | | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| RFAAP - Sump S1, VA | UPS / J218 842 33 23 | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Analysis: metals | explosives (8330) | explosives (8330) | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S1SC13 | 3/4/09 | 14:00 | | | | X | X | | | | | | X | X | | |
| S1SC14 | 3/4/09 | 14:05 | | | | X | X | | | | | | X | X | | |

**Possible Hazard Identification**

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other 72 hr

**QC Requirements (Specify)**

| | | Date | Time |
|---|---|---|---|
| 1. Relinquished By | | 3/4/09 | 16:00 |
| 2. Relinquished By | | | |
| 3. Relinquished By | | | |
| Comments | | | |

| | Date | Time |
|---|---|---|
| 1. Received By | | |
| 2. Received By | | |
| 3. Received By | | |

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E+I | Project Manager: Tim Leahy | Date: 3/10/09 | Chain of Custody Number: 107959 |
| Address: 2113 Emmorton Park Rd. | Telephone Number (Area Code)/Fax Number: 410 612 6357 / 410 612 6351 | Lab Number: | Page 1 of 1 |
| City: Edgewood / State: MD / Zip Code: 21040 | Site Contact: Steve Koitsek | Lab Contact: | |
| Project Name and Location (State): RFAAP-SWMU 51, VA | Carrier/Waybill Number: UPS / 1Z 1B 842 3305 | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Analysis: Metals | Explosives (8330) | Chloroethylvinyl ether (8240) | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~51SC15~~ 51SC15 | 3/10/09 | 10:00 | | | | X | X | | | | | | X | X | | |
| 51SC16 | | 10:05 | | | | X | X | | | | | | X | X | | |
| 51SC17 | | 10:10 | | | | X | X | | | | | | X | X | | |
| 51SC18 | | 10:15 | | | | X | X | | | | | | X | X | | |
| 51SC19 | | 10:20 | | | | X | X | | | | | | X | X | | |
| 51SC20 | | 10:25 | | | | X | X | | | | | | X | X | | |
| 51SC21 | | 10:30 | | | | X | X | | | | | | X | X | X | |
| 51SC22 | | 10:35 | | | | X | X | | | | | | X | X | | |
| 51SC23 | | 10:40 | | | | X | X | | | | | | X | X | | |
| 51SC24 | | 10:45 | | | | X | X | | | | | | X | X | | |
| 51SC25 | | 10:50 | | | | X | X | | | | | | X | X | | |
| 51SC26 | | 10:55 | | | | X | X | | | | | | X | X | | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other 72 hours

QC Requirements (Specify)

| | | | | |
|---|---|---|---|---|
| 1. Relinquished By: SKnitel | Date: 3/10/09 | Time: 1500 | 1. Received By | Date / Time |
| 2. Relinquished By | Date | Time | 2. Received By | Date / Time |
| 3. Relinquished By | Date | Time | 3. Received By | Date / Time |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E+I | Project Manager: TIM LEAHY | Date: 3/23/09 | Chain of Custody Number: 103062 |
| Address: 2113 Emmorton Park Rd. | Telephone Number (Area Code)/Fax Number: 410·612·6357 / 410·612·6351 | Lab Number | Page 1 of 2 |
| City: Edgewood; State: Md; Zip Code: 21040 | Site Contact: S. KEITAK | Lab Contact | Analysis (Attach list if more space is needed) |
| Project Name and Location (State): RFAAP-SWMU 51, Virginia | Carrier/Waybill Number: UPS / J218 842 3270 | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Metals | 1,3-DNB; 2,4-DNT; 2,6-DNT; 1-NT; 2-NT; 4-NT; NG | DIOXIN | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51SC27 | 3/23/09 | 8:00 | | | | X | X | | | | | | X | X | | |
| 51SC28 | | 8:05 | | | | X | X | | | | | | X | X | | |
| 51SC29 | | 8:10 | | | | X | X | | | | | | X | X | | |
| 51SC30 | | 8:15 | | | | X | X | | | | | | X | X | | |
| 51SC31 | | 8:20 | | | | X | X | | | | | | X | X | X | |
| 51SC32 | | 8:25 | | | | X | X | | | | | | X | X | | |
| 51SC33 | | 8:30 | | | | X | X | | | | | | X | X | | |
| 51SC34 | | 8:35 | | | | X | X | | | | | | X | X | | |
| 51SC35 | | 11:00 | | | | X | X | | | | | | X | X | | |
| 51SC36 | | 11:05 | | | | X | X | | | | | | X | X | | |
| 51SC37 | | 11:10 | | | | X | X | | | | | | X | X | | |
| 51SC38 | | 11:15 | | | | X | X | | | | | | X | X | | |

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By: SMtaL | Date: 3/23/09 | Time: 1300 | 1. Received By | Date | Time |
| 2. Relinquished By | Date | Time | 2. Received By | Date | Time |
| 3. Relinquished By | Date | Time | 3. Received By | Date | Time |

Comments

TEMP. BLANK INCLUDED

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw E+I | Tim Leahy | 3/23/09 | 108061 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 2 of 2** |
| 2113 Emmorton Park Rd. | 410-612-6357 / 410-612-6351 | | |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | |
| Edgewood / Md. / 21040 | Steve Kzitak | | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| RFHAP - SWMU 51, Va. | UPS / J218 842 3270 | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Analysis: METALS | 1,3 DNB; 2,4DNT; 2,6 DNT; 4NT; NB | DIOXIN | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51SC39 | 3/23/09 | 11:20 | | | | X | X | | | | | | X | X | | |
| 51SC40 | 3/23/09 | 11:25 | | | | X | X | | | | | | X | X | | |
| 51SC41 | 3/23/09 | 11:30 | | | | X | X | | | | | | X | X | X | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| | Date | Time |
|---|---|---|
| 1. Relinquished By | 3/23/09 | 1300 |
| 2. Relinquished By | | |
| 3. Relinquished By | | |

| | Date | Time |
|---|---|---|
| 1. Received By | | |
| 2. Received By | | |
| 3. Received By | | |

Comments
Temp. Blank INSIDE

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E+I | Project Manager: Tim Leahy | Date: 4/7/09 | Chain of Custody Number: 107795 |
| Address: 2113 Emmorton Park Rd. | Telephone Number (Area Code)/Fax Number: 410-612-6357 / 410-612-6351 | Lab Number: | Page _____ of _____ |
| City: Edgewood; State: Md.; Zip Code: 21040 | Site Contact: S. Kridak | Lab Contact: Linda Lauer | Analysis (Attach list if more space is needed) |
| Project Name and Location (State): KFAAP - SWMU 51, Va. | Carrier/Waybill Number: UPS / J21B 842 2968 | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | 1,3 DNB; 2,4 DNT; 2,4,6 TNT; 2,6 DNT; 2NT; 4NT; NG | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51SC42 | 4/7/09 | 1330 | | | | X | X | | | | | | X | |
| 51SC43 | | 1335 | | | | X | X | | | | | | X | |
| 51SC44 | | 1340 | | | | X | X | | | | | | X | |
| 51SC45 | | 1345 | | | | X | X | | | | | | X | |
| 51SC46 | | 1350 | | | | X | X | | | | | | X | |
| 51SC47 | | 1355 | | | | X | X | | | | | | X | |
| 51SC48 | | 1400 | | | | X | X | | | | | | X | |
| 51SC49 | | 1405 | | | | X | X | | | | | | X | |
| 51SC50 | | 1410 | | | | X | X | | | | | | X | |
| 51SC51 | | 1415 | | | | X | X | | | | | | X | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By: Steve Kridak | Date: 4/7/09 | Time: 1600 | 1. Received By | Date | Time |
| 2. Relinquished By | Date | Time | 2. Received By | Date | Time |
| 3. Relinquished By | Date | Time | 3. Received By | Date | Time |

Comments
Temp. blank inside - Explosives (select list 1,3 DNB; 2,4 DNT; 2,4,6 TNT; 2,6 DNT; 2NT; 4NT; NG)

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E+I | Project Manager: Tim Leahy | Date: 05/05/09 | Chain of Custody Number: 107958 |
| Address: 2113 Emmorton Park Rd. | Telephone Number (Area Code)/Fax Number: 410 612 6357 / 410 612 6351 | Lab Number: | Page 1 of 1 |
| City: Edgewood / State: Md. / Zip Code: 21040 | Site Contact: Steve Keitah | Lab Contact: Linda Lawer | Analysis (Attach list if more space is needed) |
| Project Name and Location (State): REAAP- SWMU 51, Va. | Carrier/Waybill Number: UPS / J21B 842 2002 | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | 1,3 DNB; 2,4 DNT; 2,6 DNT; 3,4 DNT; 4NT; NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51SC52 | 05/05/09 | 1100 | | | | X | X | | | | | | X |
| 51SC53 | 05/05/09 | 1115 | | | | X | X | | | | | | X |

Special Instructions/ Conditions of Receipt

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☒ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By: Steve Keitah | 5/5/09 | 3:00PM | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments: 24 hour Turn around

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Appendix C

## Disposal Documentation

# Appendix C-1

# Manifests

~~A52002186-001~~ SC PPW 2/26/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202666 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51,500 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
~~Burton Permit 518120 Line 1 expires May 06 2009.~~ CHESI EPA ID MIR000014530 in Burton, MI is acting as primary exporter for generator.
PO#4006108 CRO# DF245016-4

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 05 Day 05 Year 09

**TRANSPORTER INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Ray Staff — Date leaving U.S.: 5-6-09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ray Staff — Signature: Ray Staff — Month 5 Day 5 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brittany Oe — Signature: BO — Month 5 Day 16 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**DF24506-4**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport

A52202186-001 CH3486003

(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor — Producteur / expéditeur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL (24) MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu 2 — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: Clean Harbors Canada Inc — A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No / N° de tél.: 519 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

**B** Carrier — Transporteur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 23

8120-4900C2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Beelmcrest Drive — City / Ville: Port Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5916

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1e remorque - wagon | P 171844 | IN |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON. (International use only) — Port of exit / Point de sortie (International use only) 25

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): RAY STAFF — Tel. No. / N° de tél.: 800 541-5916

Year / Année 09 — Month / Mois 05 — Day / Jour 06 — Signature: Ray Staff

**C** Receiver / consignee — Réceptionnaire / destinataire — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 001200 (duplicate)

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année 09 — Month / Mois 05 — Day / Jour 06 — Time / Heure 1020 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No / N° d'immatriculation/d'id provincial

| (i) Prov. code / Code prov 3 | Shipping name / Appellation réglementaire 4 | Class / Classe Sub. class(es) / Classe(s) sub. 5 | UN No / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée 8 | Units / L or / ou Kg / Unités 8 | Packaging / Contenant No. / N° 9 | Packaging / Contenant Codes Int - ext. 9 | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2112 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-DICHLOROTOLUENE) | N/A | N/A | MR | EST 23140 | Kg | 1 | 03 | S41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. / Cont. | Decont. V |
|---|---|---|---|---|---|---|---|
| | KG | | 06 | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Ol / De | D or R code / Code É ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/16 | 110 | 1200 | D05 | C42 | A3170 | H12 | Y41 | N/A | N/A | 3825.61.00.10 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Ole

Signature: BO — Tel. No. / N° de tél.: 519-967-10

Special handling / Manutention spéciale: CLEAN HARBORS 24HR

☐ Attached / Ci-joint ☑ As follows / Ci-contre 519-864-1801

NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 20: 810 715-2700

21 Date shipped / Date d'expédition — Year / Année 09 — Month / Mois 05 — Day / Jour 06 — Time / Heure ☑ A.M. ☐ P.M. 1233 — Scheduled arrival date / Date d'arr. — Year / Année 09 — Month / Mois 05

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / j**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

A52202186-001 SC PPW 2/26/2009

Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202667 FLE |

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000136236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51,000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171

(M) Burton Prenote #49429 Line 1 expires May 09 2009. CHESI EPA ID MIR000014530 in Burto MI is acting as primary exporter for generator.

AOC#486/08 CM# DF24505-6

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 05 Day: 05 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Jerry Knapp Date leaving U.S.: 5-6-09

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jerry Knapp 7177/3802
Signature: Jerry Knapp
Month: 5 Day: 5 Year: 9
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Brittany Ole
Signature: BO
Month: 5 Day: 6 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**DF24505-6**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport

AB2205188-001 CEN488508

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

ENVIRONMENTAL — KER000014830

Company name / Nom de l'entreprise: **Clean Harbors Env Services Inc**

Mailing address / Adresse postale: **4175 Dort Highway** — City / Ville: **Burton** — Province: **MI** — Postal code / Code postal: **48529**

E-mail / Courier électronique: **archives.sarnia@cleanharbors.com** — Tel. No. / N° de tél.: **810 715-2700**

Shipping site address / Adresse du lieu de l'expédition: **4175 Dort Highway**

City / Ville: **Burton** — Province: **MI** — Postal code / Code postal: **48529**

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: **Clean Harbors Canada Inc** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: **A-031800**

Mailing address / Adresse postale: **4090 Halifax Road 8R21** — City / Ville: **Corunna** — Province: **ON** — Postal code / Code postal: **N0N 1G0**

E-mail / Courier électronique: **carrier.sarnia@cleanharbors.com** — Tel. No. / N° de tél.: **519 864-1031**

Receiving site address / Adresse du lieu de l'expédition: **4090 Halifax Road 8R21**

City / Ville: **Corunna** — Province: **ON** — Postal code / Code postal: **N0N 1G0**

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: **8120-4700C2**

Company name / Nom de l'entreprise: **Emelman Trucking Company**

Mailing address / Adresse postale: **1 Receiver Drive** — City / Ville: **East Saint Louis** — Province: **IL** — Postal code / Code postal: **62205**

E-mail / Courier électronique: **N/A** — Tel. No. / N° de tél.: **800 841-5918**

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1e remorque - wagon: **P5261** — Registration No. / N° d'immatriculation — Prov.: **IN**

Trailer - Rail car No. 2 / 2e remorque - wagon

Port of entry / Point d'entrée (international use only): **SARNIA ON** — Port of exit / Point de sortie (international use only)

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tel qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): **Jerry KNAPP** — Tel. No. / N° de tél.: **800 841-5918**

Year / Année: **09** — Month / Mois: **05** — Day / Jour: **06** — Signature: **Jerry Knapp**

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: **A031800**

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifeste utilisés: **001202**

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courier électronique — Tel. No. / N° de tél.

Receiving site address / Adresse du lieu de destination: **Same**

Date received / Date de réception — Year / Année: **09** — Month / Mois: **05** — Day / Jour: **06** — Time / Heure: **1015** ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincia

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub-class(es) / Classe(s) sub. | UN No. / N°NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Containint No. / N° | Packaging/Containint Codes Int. - ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) ONT | ENVIRONMENTALLY HAZARDOUS SUBS. (2,4-DICHLOROPHENOL) | N/A | N/A | NR | 22450 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Shipment / Envoi — Refused / Refusé | Decor — Pack. / Cont. |
|---|---|---|---|---|---|---|
| | Kg | | 06 | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/18 | 109 | 1200 | D05 | C42 | A3150 | H12 | Y41 | N/A | N/A | 3825.61.00.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): **B. Hany Obe**

Signature: **B**

Tel. No. / N° de tél.: **519-864-10**

Special handling / Manutention spéciale: **CLEAN HARBORS 24HR**

☐ Attached / Ci-joint ☑ As follows / Ci-contre: **519-864-1201**

**NOTICE EXP DEC 15, 2008**

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): **JOANN SCHUTTER** — Signature: **JS** — Tel. No. / N° de tél.: **810 715-2700**

Date shipped / Date d'expédition — Year / Année: **09** — Month / Mois: **05** — Day / Jour: **06** — Time / Heure: ☑ A.M. ☐ P.M. **1300**

Scheduled arrival date / Date d'arrivée prévue — Year / Année: **09** — Month / Mois: **05** — Day / Jo: **0**

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaun**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A852051660 001 SC FPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104949 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
IL0000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AS THE
BOC# 486/09 PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CN#NF49424-9

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month/Day/Year: 02/24/09

**TRANSPORTER/INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Gary Conway Date leaving U.S.: 2-25-09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: GARY CONWAY
Signature: Gary Conway
Month/Day/Year: 02/24/09

Transporter 2 Printed/Typed Name:
Signature:
Month/Day/Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month/Day/Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132. | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a.

Printed/Typed Name: Nicole Farr.
Signature: Nicole Farr
Month/Day/Year: 02/25/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

**NF49424-9**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A Generator / consignor / Producteur / expéditeur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL (AA) MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway | City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com | Tel. No. / N° de tél.: (810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway | City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

**B Carrier / Transporteur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

8120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive | City / Ville: East Saint Louis | Province: IL | Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A | Tel. No. / N° de tél.: 800 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | | |
| Trailer - Rail car No. 2 / 2e remorque - wagon | PT8597 | |

Port of entry / Point d'entrée: SARNIA, ON. (International use only) | Port of exit / Point de sortie (International use only) 25

**Intended Receiver / consignee / Réceptionnaire / destinataire prévu** 2 — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Clean Harbors Canada Inc | A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 | City / Ville: Corunna | Province: ON | Postal code / Code postal: N0M 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com | Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 | City / Ville: Corunna | Province: ON | Postal code / Code postal: N0N 1G0

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): GARY CONWAY | Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 | Month / Mois: 02 | Day / Jour: 25 | Signature: Gary Conway

**C Receiver / consignee / Réceptionnaire / destinataire** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 008104949 FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal

E-mail / Courrier électronique | Tel. No / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception: Year / Année | Month / Mois | Day / Jour | Time / Heure ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No. / Provincial ID No. / N° d'immatriculation / d'id provincial

| | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe Sub. class(es) / Classe(s) sub. 5 | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / Unités 8 | Packaging / Contenant No. / N° | Packaging / Contenant Codes Int. - ext. | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 22910 | Kg | 1 | 06 | S |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| | Quantity received / Quantité reçue | Units / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont Pack. / Cont. |
|---|---|---|---|---|---|---|---|
| (i) | | | | | | | |
| (ii) | | | | | | | |
| (iii) | | | | | | | |
| (iv) | | | | | | | |

| | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 2/18 | 42 | 1000 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature | Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR#

☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER | Signature | Tel. No. / N° de tél.: 810 715-2700 20

21 Date shipped / Date d'expédition: Year / Année: 09 | Month / Mois: 02 | Day / Jour: 25 | Time / Heure: 11:18 ☒ A.M. ☐ P.M. | Scheduled arrival date / Date d'arrivée prév: Year / Année: 09 | Month / Mois: 02 | Day / Jour: 26

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanc)**

A82202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104950 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company #800 - 38819

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 52000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING
POC#486108
Cont# NF4947-9 AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month/Day/Year: 02/24/09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): David Myers
Date leaving U.S.: 2.25.09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DAVID MYERS
Signature: David Myers
Month/Day/Year: 02/24/09

Transporter 2 Printed/Typed Name
Signature
Month/Day/Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk
Signature: Darlene Wiwcharuk
Month/Day/Year: 02/25/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

(cana) 11/17/2005

**NF49476-9**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor — Producteur / expéditeur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: ENVIRONMENTAL Clean Harbors Environmental Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A-031806
Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0
E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519) 864-1021
Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

**B** Carrier — Transporteur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: 8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule
Trailer - Rail car No. 1 / 1re remorque - wagon: Registration No. / N° d'immatriculation: P171940 — Prov.: IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — International use only
Port of exit / Point de sortie — International use only

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): DAVID MYERS
Tel. No. / N° de tél.: 800)541-5918
Year / Année: 09 Month / Mois: 02 Day / Jour: 25 Signature:

**C** Receiver / consignee — Réceptionnaire / destinataire

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial:

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 00210495O FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année: Month / Mois: Day / Jour:
Time / Heure: ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. — N° d'immatriculation/d'id provincial:

| (i) Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Container — No. / N° | Codes | Phys. state / Etat phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 23170 | Kg | 1 | 06 | S41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Refused / Refusé | Decont. — Pack. / Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 9/18 | 44 | 1200 | D05 | CA2 | A3190 | H12 | Y42 | N/A | N/A | 3005.101.00.10 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie):
Signature:
Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR#
☐ Attached / Ci-joint: ☒ As follows / Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete.*
*Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 Month / Mois: 02 Day / Jour: 25 Time / Heure: 1745 ☒ A.M. ☐ P.M.
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 Month / Mois: 02 Day / Jour: 25

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanche)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PFW 2/10/2009 Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104951 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035304

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CHD48600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS
AOC# 456109 THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CON# NF49477-7

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month/Day/Year: 02/24/09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Chris Nitcher Date leaving U.S.: 2.25.09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Nitcher
Signature: Chris Nitcher
Month/Day/Year: 2/24/09

Transporter 2 Printed/Typed Name
Signature
Month/Day/Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Farr
Signature
Month/Day/Year: 02/25/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49477-7**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A Generator / consignor / Producteur / expéditeur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: ENVIRONMENTAL MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

**B Carrier / Transporteur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: Bear Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation: Trailer - Rail car No. 1 / 1e remorque - wagon: P172425 (Prov.: ID); Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — Port of exit / Point de sortie: (international use only)

**Carrier Certification :** *I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Chris Nitcher — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 25 — Signature: Chris Nitcher

**C Receiver / consignee / Réceptionnaire / destinataire** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial:

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 005104951ELE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année: — Month / Mois: — Day / Jour: — Time / Heure: ☐ A.M ☐ P.M

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincia:

| (3) Prov. code / Code prov. | (4) Shipping name / Appellation réglementaire | (5) Class / Classe — Sub. class(es) / Classe(s) sub. | (6) UN No. / N° NU | (7) Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | (8) Units / L or / ou Kg / Unités | (9) Packaging/Container No. / N° | (9) Codes Int. – std. | (10) Phys. state / État phys. | Quantity received / Quantité reçue | (11) Units / L or / ou kg / Unités | (32) Comments / Commentaires | (33) Handling Code / Code de manutention | (34) Shipment / Envoi Accepted / Accepté | Refused / Refusé | Decon Pack. / Cont. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 22410 | Kg | 1 | 06 | S 41 | | | | | | | |
| (ii) | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | |

| (11) Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | (12) Shipment / Envoi | Of / De | (13) D or R code / Code D ou R | (14) C code / Code C | (15) Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | (16) H code / Code H | (17) Y code / Code Y | (18) National code in country of / Code du pays: Export / Exportation | Import / Importation | (19) Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 3/19 | 47 | 120 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3925 61.00 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: ☐ Attached / Ci-joint: ☒ As follows / Ci-contre: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

(21) Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 25 — Time / Heure: 0900 A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prév. — Year / Année: 09 — Month / Mois: 02 — Day / J: 2

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanc**

452202186-001 SC PPW 2/13/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3715 | 002104952 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON NON 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID No. MIR000014530, IS ACTING AS THE
AOC# 496/09
CNN#NF47478-5 PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 24 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Dennis Ebers Date leaving U.S.: 2.25.09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Dennis Ebers
Signature: Dennis Ebers
Month Day Year: 02 24 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H130 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Farr
Signature: Nicole Farr
Month Day Year: 02 25 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49478-5**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH346600E A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2 — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606

Clean Harbors Canada Inc

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 25

8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | P-72516 | In |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON. (international use only) — Port of exit / Point de sortie (international use only) 25

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Dennis Ebers — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 25 — Signature: Dennis Ebers

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 00210495 2FU

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale — City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception: Year / Année — Month / Mois — Day / Jour — Time / Heure ☐ A.M. ☐

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID N° d'immatriculation/d'id provinc

| (i) | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée 8 | Units / L or / ou Kg / Unités | Packaging/Containment / No. / N° 9 | Codes / Int. - ext. | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 03010 | Kg | 1 | 06 | S41 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 — Accepted / Accepté | Refused / Refusé | Dec Pack. Cont |
|---|---|---|---|---|---|---|
| | | | | | | |

| (i) | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 9/18 | 46 | 1200 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « Autre » (spécifier)

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale: ☐ Attached / Ci-joint: ☐ As follows / Ci-contre: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700 20

21 Date shipped / Date d'expédition: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 25 — Time / Heure: 0830 ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée p: Year / Année: 09 — Month / Mois: 02 — Day: 26

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blan**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186.001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3716 | 002104953 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000136236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN2077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID No. MIR000014530, IS ACTING AS THE
AOC# 466/09 PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CD# NE49421-5

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIAN T TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 02 Day: 24 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Paul Dundon Date leaving U.S.: 2-25-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: PAUL DUNDON — Signature: Paul Dundon — Month: 2 Day: 24 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18d. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Farr — Signature — Month — Day — Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001 (cana) 11/17/2005

**NF49421-5**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor — Producteur / expéditeur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu 2 — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: Clean Harbors Canada Inc — A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier — Transporteur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 23

8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1e remorque - wagon: P502162 — IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. (international use only) — Port of exit / Point de sortie: (international use only) 25

Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): PAUL DUNDON — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 25 — Signature: Paul Dundon

**C** Receiver / consignee — Réceptionnaire / destinataire — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvements/manifestes utilisés: 005104953 FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année: — Month / Mois: — Day / Jour: — Time / Heure: ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| (i) | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage/ de risque 7 | Quantity shipped / Quantité expédiée | Units 8 — L or / ou Kg / Unités | Packaging/Contenant 9 — No. / N° | Codes | Int – ext. | Phys. state / État phys. 10 | Quantity received / Quantité reçue 31 | Units L or / ou kg / Unités | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 — Accepted / Accepté | Refused / Refusé | Decont Pack. / Cont. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 033600 | kg | 1 | 06 | | S41 | | | | | | | |
| (ii) | | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | | |

| (i) | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 9/18 | 45 | 1200 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700 20

21 Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 25 — Time / Heure: ☒ A.M. ☐ P.M. 8000 — Scheduled arrival date / Date d'arrivée prév. — Year / Année: 09 — Month / Mois: 02 — Day / Jo: 2

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanc)**

452202106-001 SC FTW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104954 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135238

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CHS48600B
POC#486108
NF49425-1
ERG#171
CHEST, EPA ID NO MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month/Day/Year: 02/24/09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Kurt Neterneyer — Date leaving U.S.: 2.25.09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kurt Neterneyer — Signature: Kurt Neterneyer — Month/Day/Year: 2/24/09
Transporter 2 Printed/Typed Name — Signature — Month/Day/Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nicole Farr — Signature — Month/Day/Year: 02/25/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

(cana) 11/17/2005

**NF49475-1**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor — Producteur / expéditeur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: ENVIRONMENTAL (A1) MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ~~Env~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

**B** Carrier — Transporteur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: 8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: PITI022 — Prov.: In.

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée (International use only): SARNIA, ON.

Port of exit / Point de sortie (International use only):

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Kurt Nerameyer — Tel. No. / N° de tél.: 800)541-5918

Signature:

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 25

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 002104954FIE

**C** Receiver / consignee — Réceptionnaire / destinataire

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial:

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année: — Month / Mois: — Day / Jour: — Time / Heure: ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No./Provincial ID No. — N° d'immatriculation/d'id provincial:

| | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N°NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Contenant — No. / N° | Codes Int – ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 22550 (BST) | Kg | 1 | 06 | S41 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Shipment / Envoi — Refused / Refusé | Decont. — Pack. / Cont. | Decont. — Veh. / Véh. |
|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | |
| (ii) | | | | | | | | |
| (iii) | | | | | | | | |
| (iv) | | | | | | | | |

| | Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 2/18 | 48 | 1200 | D05 | C40 | ~~AB1~~ (A1) AB190 | H12 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie):

Signature: — Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009

☐ Attached / Ci-joint ☒ As follows / Ci-contre

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER

Signature:

Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 25 — Time / Heure: 1004 ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 25

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanche**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 4922021860001 SC PFW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104955 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600E ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS
AOC#486/09
CON#NF494223 THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month/Day/Year: 02/24/09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Leslie Zahner — Date leaving U.S.: 2.25.09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leslie Zahner — Signature: Leslie Zahner — Month/Day/Year: 02/24/09
Transporter 2 Printed/Typed Name — Signature — Month/Day/Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Brittany Ole — Signature: BO — Month/Day/Year: 2/25/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49422-3**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CM3486008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cerm) 11/17/2005

**A Generator / consignor / Producteur / expéditeur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL MIR0000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N-1G0

E-mail / Courrier électronique: butler.anne@cleanharbcd.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B Carrier / Transporteur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

9120-6PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Receherse Drive — City / Ville: Port Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1re remorque - wagon: D72535 — Prov.: IL

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — International use only — Port of exit / Point de sortie: International use only 25

Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Bertha Zapata — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 12 — Day / Jour: 25 — Signature:

**C Receiver / consignee / Réceptionnaire / destinataire** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28

A031306

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 25 — Time / Heure 29: 12:50 ☐ A.M. ☑ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / Haz. gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging / Contenant 9 — No. / N° | Codes | Phys. state / État phys. 10 | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 — Accepted / Accepté | Refused / Refusé | Decont. 35 — Pack. Cont. | Veh. Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2111 | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 23270 | Kg | 1 | 06 | S | | Kg | | do | | | | |
| (ii) | | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | | |

| | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Or / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 512213 | 2/14 | 50 | 120 | D15 | Q2 | A3010 | H11 | Y42 | N/A | N/A | 3905.21.00.00 |
| (ii) | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. 37

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Orr

Signature: BO — Tel. No. / N° de tél.: 519-964-1021

Special handling / Manutention spéciale 22: ☐ Attached / Ci-joint ☐ As follows / Ci-contre: CLEAN HARBORS 24HRS 519-864-1201 NOTICE EXP DEC 15, 2005

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets. 20

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition 21 — Year / Année: 05 — Month / Mois: 12 — Day / Jour: 25 — Time / Heure: ☐ A.M. ☑ P.M. 11:16

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 05 — Month / Mois: 12 — Day / Jour: 25

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104956 FLE |

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AS
AOC#4600108 THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CDH# NF49420-7

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R.Blankenship — Month: 02 Day: 24 Year: 09

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Date leaving U.S.: 2-25-09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ed Mitchell — Signature: Ed Mitchell — Month: 2 Day: 24 Year: 09
Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: B. Hany Ali — Signature: BA — Month: 12 Day: 25 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49420-7**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway, Burton, MI, 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway, Burton, MI, 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No.: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1, Corunna, ON, NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1, Corunna, ON, NON 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4PUQC2

Company name / Nom de l'entreprise: Seelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive, East Saint Louis, IL, 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation: Trailer - Rail car No. 1 / 1re remorque - wagon: P17711 — Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ONT. — International use only

Port of exit / Point de sortie — International use only

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): J J Wiedbusch — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 12 — Day / Jour: 15 — Signature: J J Wiedbusch

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movements document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifeste utilisés: 002104 15LC1F

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville — Province — Postal code / Code postal:

E-mail / Courrier électronique — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 15

Time / Heure: 11 15 90 ☐ A.M. ☑ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| (i) | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Container No. / N° | Packaging/Container Codes Int – ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2217 | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 21540 | Kg | 1 | 06 | 8 41 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Shipment / Envoi — Refused / Refusé | Decont. — Pack. / Cont. | Decont. — Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 00 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/10 | 47 | 900 | D5 | (14) | A3150 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Orr

Signature: BO — Tel. No. / N° de tél.: 519-864-1021

Special handling / Manutention spéciale: ☐ Attached /Ci-joint ☐ As follows/ Ci-contre: CLEAN HARBORS 24HRS 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 15

Time / Heure: ☐ A.M. ☐ P.M. 1185

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 15

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104957 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000136236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 48000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B
AOC# 48L09
CON# NF494835
ERG#171
CHESI, EPA ID NO. MIR 000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE generator.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month 02 Day 25 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): James Kinney
Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JAMES KINNEY 678-38813
Signature: James Kinney
Month 02 Day 25 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk
Signature: Darlene Wiwcharuk
Month 02 Day 26 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49483-5**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIRD000016530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-6PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Rocheloire Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: P171740 — Prov.: IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: BARRIER region use only — Port of exit / Point de sortie: International use only

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): JAMES KINNEY — Tel. No. / N° de tél.: 800 541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 26 — Signature: James Kinney

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 002210415711

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 26 — Time / Heure: 1045 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Lor / ou Kg / Unités | Packaging/Contenant: No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2112 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dimethylaniline) | N/A | N/A | NR | 22050 | Kg | 1 | 06 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Lor / ou kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont: Pack. / Cont. | Decont: Vi |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5133523 | 2/10 | 51 | 200 | D 5 | C42 | AK110 | H12 | Y45 | N/A | N/A | 3825.61.00.10 |
| (i) | | | | | | | | | | | |
| (ii) | International use only | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wiwcharuk

Signature: Wiwcharuk — Tel. No. / N° de tél.: 5198641102

Special handling / Manutention spéciale: CLEAN HARBORS 24HR

☐ Attached / Ci-joint ☑ As follows / Ci-contre: 519-864-1201

NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER

Signature:

Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 26 — Time / Heure: 1700 ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prév — Year / Année: 09 — Month / Mois: 02 — Day / Jr: 26

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaun

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104958 FLE |

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000136236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID No. MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON Behalf of the Generator
CNH# NF494916-7
ROC# 4906/08

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month/Day/Year: 02/25/09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI.
Transporter signature (for exports only): By Heck — Date leaving U.S.: 2-26-09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bryan Heck — Signature: By Heck — Month/Day/Year: 02/25/09

Transporter 2 Printed/Typed Name — Signature — Month/Day/Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk — Signature: Wiwcharuk — Month/Day/Year: 02/26/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the Generator is shipping

# MANIFEST
# MOUVEMENT / MANIFESTE

NF49496-7

A Generator / consignor — Producteur / expéditeur

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provinciale: MZR000014830
Mailing address / Adresse postale: 1475 Port Highway
City / Ville: Huron
Province: MI
Postal code / Code postal: 48329
E-mail / Courrier électronique: schriner.emails@cleanharbors.com
Tel. No. / N° de tél.: (810) 715-2700
Shipping site address / Adresse du lieu de l'expédition: 1475 Port Highway
City / Ville: Huron
Province: MI
Postal code / Code postal: 48329

Shipped Receiving / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provinciale: A-031806
Mailing address / Adresse postale: 4090 Halifax Road 8961
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0
E-mail / Courrier électronique: jestelin.ann@cleanharbors.com
Tel. No. / N° de tél.: 519) 354-1021
Receiving site address / Adresse du lieu de réception: 4090 Halifax Road 8961
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

B Carrier / Transporteur

Company name / Nom de l'entreprise: Boulden Trucking Company
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provinciale: 6120-4FOOCR
Mailing address / Adresse postale: 1 Beechcroft Drive
City / Ville: Port Elgin
Province: ON
Postal code / Code postal: N0H 2C6
E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800 561-8918
Vehicle / Véhicule: P11010
Trailer - Rail car No. 1 / 1re remorque - wagon:
Trailer - Rail car No. 2 / 2e remorque - wagon:
Registration No. / N° d'immatriculation:
Prov.: ON
Port of exit / Point de sortie:
Port of entry / Point d'entrée: WINDSOR ONT.
International use only

Carrier certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur tel que décrit à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Bryan Heck
Signature: Bryan Heck
Year / Année: 09 Month / Mois: 02 Day / Jour: 26
Tel. No. / N° de tél.: 800 561-8918

C Receiver / consignee — Réceptionnaire / destinataire

Reference No., or other movement document(s) attached / used / N° de référence ou autres documents de mouvements annexés ou utilisés: A031049551FCC
Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire sont les mêmes que ceux de la partie A
Yes / Oui
No, complete the box below / Non, remplir la case ci-après
Company name / Nom de l'entreprise
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provinciale: A031806
Mailing address / Adresse postale
City / Ville
Province
E-mail / Courrier électronique
Postal code / Code postal
Receiving site address / Adresse du lieu de réception
Tel. No. / N° de tél.
Date received / Date de réception: Year / Année: 09 Month / Mois: 02 Day / Jour: 26
Time / Heure: 1080
Material or recyclable material to be transferred, specify intended company, manner SI / Les déchets ou matières recyclables donnant lieu transfrontière, préciser le nom du destinataire

| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | (x) | (xi) | (xii) | (xiii) | (xiv) | (xv) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / exportation | Import / importation | Customs code(s) / Code(s) douaniers | Quantity received / Quantité reçue | Units / Lor / ou Kg | Handling code / Code de manipulation |
| 013305 | 01 | 51 | IWD | D05 | C9 | A3150 | H12 | Y45 | N/A | N/A | 3825.61.00 | 9 | kg | 06 |

International use only

Handling code "Other" (specify) / Si code de manipulation = autre - (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements de la partie C sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wuchner
Signature: DW:wchanuk
Tel. No. / N° de tél.: 5198641031

Special handling / Manutention spéciale
Attached / Ci-joint:
As follows / Ci-dessous:

Date shipped / Date d'expédition: Year / Année: 09 Month / Mois: 02 Day / Jour: 26
Time / Heure: AM / PM
Date received / Date de réception: Year / Année: 09 Month / Mois: 02 Day / Jour: 26
Time / Heure: AM / PM

Consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie

7 (07/07)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-9718 | 002104959 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7831

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Boolmen Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CB3486008 ERG#171 CHESI, EPA ID NO. MIR 000014530, IS ACTING AS
ROC #4616/08 the Primary Exporter on behalf of the Generator
Coll#NF494959

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month Day Year: 02 25 09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron MI
Transporter signature (for exports only): Date leaving U.S.: 2-26-09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Mattingly
Signature: Richard Matt
Month Day Year: 02 25 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwcharuk
Signature: D Wiwcharuk
Month Day Year: 02 26 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

NF49495-9

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CHX486008 AB6501283-001

Movement Document/Manifest Reference No. / N° de référence du document de mouvement/manifeste

(Cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MXR000014530

ENVIRONMENTAL

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courier electronique: schinner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Récipiendaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 6080 Tallet Road RR#2 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courier electronique: butler.sam@cleanharbors.com — Tel. No. / N° de tél.: 519.864-3021

Receiving site address / Adresse du lieu de réception: 6090 Tallet Road RR1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8180-420008

Company name / Nom de l'entreprise: Sueleen Trucking Company

Mailing address / Adresse postale: 1 Secabaugs Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courier electronique: N/A — Tel. No. / N° de tél.: 800 642-5210

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.

Trailer - Rail car No. 1 / 1re remorque - wagon: 38802 P17009 — IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée (marine port use only): SARNIA, ON

Port of exit / Point de sortie: International site privi

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as stated in Part B and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur, en vue de leur livraison au réceptionnaire / destinataire, indiqués à la partie B et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Richard Whitmore — Tel. No. / N° de tél.: 519-431-4776

Year / Année: 05 — Month / Mois: 02 — Day / Jour: 28 — Signature: Richard Whitmore

**C** Receiver / Consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other documents (shipper's use) / N° de référence des autres documents de mouvement (utilisation expéditeur): 0210485126

Receiver / consignee information same as in Part B / Les renseignements du réceptionnaire / destinataire est la même que la partie B: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courier electronique: — Tel. No. / N° de tél.:

Receiving site address / Adresse du lieu de réception: Same

Date received / Date de réception — Year / Année: 06 — Month / Mois: 02 — Day / Jour: 28 — Time / Heure: 10:55 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name. Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No. / Provincial ID No. / N° d'immatriculation/identité provinciale:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) s.p. | UN No. / N° NU | Packing group / Gr. d'emballage | Quantity shipped / Quantité expédiée | Units / Unités | Containers / Nbre de contenants | Codes | Net qty / Qté nette |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2182 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dimethylaniline) | N/A | N/A | NR | 2822 | kg | 1 | 06 | 6.41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

Quantity received / Quantité reçue: — Units / Unités: kg — Comments / Commentaires: — Handling Code / Code de manutention: 06 — Shipment Accepted / Expédition acceptée — Rejected / Refusée — Partial / Partielle — Count / Nbre — Decont. Veh. / Véh. décont.

If handling code "Other", specify / Si code de manutention « Autre », spécifier:

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H-code / Code H | Y code / Code Y | Country of / Pays de — Export / Exportation | Country of / Pays de — Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 9/19 | 52 | D05 | C40 | A3190 | H12 | Y40 | US | CA | 3826.00.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

Receiver / consignee certification: I certify that the information contained in Part C is complete and correct. / Attestation du réceptionnaire / destinataire : J'atteste que toutes les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Whitmore

Signature: Darlene Whitmore — Tel. No. / N° de tél.: 519-431-4776

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ See above / Ci-dessus

Generator / consignor certification: I certify that the information contained in Part A is complete and correct. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): ANDREA SCHINNER

Signature: — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 06 — Month / Mois: 02 — Day / Jour: 28 — Time / Heure: 08:57 ☐ A.M. ☐ P.M. — Copy / Copie: 3 — Total Nbre of Mov. Doc. / Nbre total de doc. de mouvement: 3 — Day / Jour: 28

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104960 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CR348500B
PO#4616106
PROFIT CODE NEPHM15
CHESI, EPA ID No. MIR000014530, IS ACTING AS THE Primary Exporter on behalf of the Generator

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month/Day/Year: 02/25/09

**TR ANSPORTER INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. — Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): — Date leaving U.S.: 2.26.09

17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Rob Hoeft | | 02 | 25 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Darlene Winchcomb | D Winchcomb | 12 | 26 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the Generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

NF49495

This Movement document/manifest conforms to all federal and provincial regulations and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport

CH3486008 A52852186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(Blank) 11/17/2006

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Province ID No. / N° d'immatriculation - d'id. provinciale

ENVIRONMENT (4) MED0000014630

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dorr Highway — City / Ville: Durham — Province: MI — Postal code / Code postal: 48529

E-mail / Courier electronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 715-8700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dorr Highway — City / Ville: East Tawas — Province: MI — Postal code / Code postal: 48629

Intended Receiver / consignee / Récepteur / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Province ID No. / N° d'immatriculation - d'id. provinciale: A-031806

Mailing address / Adresse postale: 4090 Walker Road N8N1 — City / Ville: Windsor — Province: ON — Postal code / Code postal: N8W 3R8

E-mail / Courier electronique: burton.ann@cleanharbors.com — Tel. No. / N° de tél.: 519 884-1023

Receiving site address / Adresse du lieu de réception: 4090 Walker Road N8N1 — City / Ville: Windsor — Province: ON — Postal code / Code postal: N8W 3R8

**B** Carrier / Transporteur — Registration No. / Province ID No. / N° d'immatriculation - d'id. provinciale: 8128-EMOCS

Company name / Nom du transporteur: Resilient Trucking Company

Mailing address / Adresse postale: 1 Resilience Drive — City / Ville: Port Saint Louis — Province: MI — Postal code / Code postal: 48058

E-mail / Courier electronique: N/A — Tel. No. / N° de tél.: 800 662-0819

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P171019 — Registration No. / N° d'immatriculation — Prov.: Tenn.

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Poste frontalier: Blue Water Bridge — Postal exit / Poste de sortie: (International use only)

Carrier Certification: I certify that I have received goods as described above from the generator / consignor of this delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur: J'atteste avoir reçu les marchandises susmentionnées du producteur / expéditeur de la présente livraison à l'intention du récepteur / destinataire tel qu'il figure à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Mike Koch — Tel. No. / N° de tél.: 800 521-5819

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24 — Signature: Mike Koch

**C** Receiver / consignee / Récepteur / destinataire — Registration No. / Province ID No. / N° d'immatriculation: A031806

Receiver / consignee information same as in Part A / Les renseignements du récepteur / destinataire sont les mêmes que ceux de la partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-après

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courier electronique: — Tel. No. / N° de tél.:

Receiving site address / Adresse du lieu de réception: Same

Date received / Date de réception: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 26 — Time / Heure: 1040

If waste or recyclable material is to be transferred, specify / Si déchets ou matières recyclables sont transférés, préciser: — Province / Territory ID No. / N° d'immatriculation provinciale/territoriale

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) s.s. | UN No. / N° ONU | PG / GE | Quantity / Quantité | Units / Unités | Packaging group / Groupe d'emballage — Type | Code | Prov. state / Etat prov. |
|---|---|---|---|---|---|---|---|---|---|
| (a) | RIIP [illegible] (2,4-dinitrotoluene) | N/A | N/A | III | 83240 | kg | 1 | 06 | MI |
| (b) | | | | | | | | | |
| (c) | | | | | | | | | |
| (d) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires |
|---|---|---|
| | kg | 00 |
| | | |
| | | |
| | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) 513303 | 9/10 | 53 [illegible] | DOS | CAD | A3150 | H12 | Y42 | N/A | N/A | 3824.40.00.10 | |
| (b) | | | | | | | | | | | |
| (c) | | | | | | | | | | | |
| (d) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du récepteur / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Winchester

Signature: Winchester — Tel. No. / N° de tél.: 519 884-1021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☐ Via Inbound Courier

Date released / Date d'expédition: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 26 — Time / Heure: 1040

Date received / Date de réception: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 26 — Time / Heure: 1040

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) AB2202186-001 SC PPW 2/26/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202579 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III RQ | 001 | DT | 50000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
Burton Permit 518120 Line 1 expires May 06, 2009. CHESI EPA ID MIR000014580 in Burton, MI is acting as primary exporter for generator.
AOC#402608 CWO# NF494464-5

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

| Generator's/Offeror's Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | | 03 | 09 | 09 |

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): James Kinney Date leaving U.S.: 3-10-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| JAMES KINNEY 628-38813 | James Kinney | 03 | 09 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Darlene Winchanek | Darlene Winchanek | 03 | 10 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49464-5**

This Movement document/manifest is [illegible]
Ce document de mouvement/manifeste [illegible]
Mouvement transfrontalier [illegible] 12/17/2009

CB3486008 2522021866-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Expéditeur / consignataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIS000044650

Company name / Nom de l'entreprise: Clean Harbors Environmental Services, Inc.

Mailing address / Adresse postale: 1915 Port Highway — City / Ville: Port Edwards — Province: WI — Postal code / Code postal: 54469

Email / Courrier électronique: johnson.randall@cleanharbors.com — Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 1474 Port Highway — City / Ville: Belville — Province: ON — Postal code / Code postal: L0R 1B0

Intended Receiver / consignee / Récipiendaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation / d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Walker Road #861 — City / Ville: Windsor — Province: ON — Postal code / Code postal: N9A 7A9

Email / Courrier électronique: [illegible]@cleanharbors.com — Tel. No. / N° de tél.: 519 944-1021

Receiving site address / Adresse du lieu de réception: 4090 Walker Road #861

City / Ville: Windsor — Province: ON — Postal code / Code postal: N9A 7A9

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: [illegible]

Company name / Nom de l'entreprise: Quality Trucking Company

Mailing address / Adresse postale: 1 Quality Drive — City / Ville: Ludlow — Province: IL — Postal code / Code postal: 62345

Email / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 543-5918

Vehicle No. / Registration No. / N° d'immatriculation — Prov.: Trailer - Remorque No. 1 / Trailer - Remorque - weight: [illegible] — Prov.: IN

Trailer / Remorque No. 2 / 2e remorque - weight:

Postal agency / Point d'acheminement — Postal use only / Réservé à l'usage postal — Postal code / Code postal — International use only / Réservé à l'usage international

Carrier Certification: *I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.* / *Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur, en vue de leur livraison au récipiendaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): [illegible] — Tel. No. / N° de tél.: 800 541-5918

Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10 — Signature: [illegible]

Reference Nos. of other movement document(s)/manifest(s) used / N°s de référence des autres documents de mouvement/manifestes utilisés: 001202577 FLE

**C** Receiver / consignee / Récipiendaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information listed as in Part A / Les renseignements du récipiendaire / destinataire est la même qu'à la Partie A: ☒ Yes / Oui ☐ No / Non, complete the box below / remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville — Province — Postal code / Code postal

Email / Courrier électronique — Tel. No. / N° de tél.

Receiving site address / Adresse du lieu de réception: Same

Date received / Date de réception: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10 — Time / Heure: 0930 ☒ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No. / Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub class(es) / Classe(s) sub. | UN No. / N°NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging/Content No. / N° | Packaging/Content Codes Int. – ext. | Phys. state / Etat phys. |
|---|---|---|---|---|---|---|---|---|---|
| (a) ONTARIO | NON-REGULATED WASTE, OTHER THAN [illegible] | N/A | N/A | III | 451 23000 | kg | 1 | 03 | S |
| (b) | | | | | | | | | |
| (c) | | | | | | | | | |
| (d) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Discont. Pack. Cont. | Discont. Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Ln No. / N° de ligne de la notification | Shipment Ship | Or / De | D or R code / Code D ou R | T code / Code T | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) 5153337 | 2 | 1 | WO | D15 | 42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00 |
| (b) | | | | | | | | | | | |
| (c) | | | | | | | | | | | |
| (d) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete.* / *Attestation du récipiendaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Winchester

Signature: [illegible] — Tel. No. / N° de tél.: 519 864-1021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: CLEAN HARBORS 2010 519-864-1201 BOFECS EXP. DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete.* / *Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHUELER

Signature: [illegible] — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10 — Time / Heure: ☒ A.M. ☐ P.M. 1110

Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10

MOE 04-1917 (07/02)

[illegible] completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

A52202186-001 SC PPW 2/26/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202580 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000136230

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III RQ | 001 | DT | 48000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
PAC# 486108 CD# NF49463-7

Burton Prenote 513120 Line 1 expires May 06, 2009. CHESI EPA ID MIR000014580 in Burton, MI is acting as primary exporter for generator.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month 03 Day 09 Year 09

**TRANSPORTER INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Richard Mattingly Date leaving U.S.: 3-10-09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Mattingly — Signature: Richard Mattingly — Month 03 Day 09 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk — Signature: Darlene Wiwcharuk — Month 03 Day 10 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49463-7**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CE3496008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor — Producteur / expéditeur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: ENVIRONMENTAL (+) MIRGG0014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

| Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal |
|---|---|---|---|
| 4475 Dort Highway | Burton | MI | 48529 |

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A-031806

| Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal |
|---|---|---|---|
| 4090 Telfer Road RR#1 | Corunna | ON | N0N 1G0 |

E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier — Transporteur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: 6120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

| Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal |
|---|---|---|---|
| 1 Racehorse Drive | East Saint Louis | IL | 62205 |

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800) 541-5916

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | 38502 D171009 | IN |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON. — International use only
Port of exit / Point de sortie — International use only

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Richard Mathias — Tel. No. / N° de tél.: 800 )541-5916

Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10 — Signature:

**C** Receiver / consignee — Réceptionnaire / destinataire — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 0912025201FLE

Receiver / consignee information same as in Part A — Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville — Province — Postal code / Code postal:
E-mail / Courrier électronique — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10
Time / Heure: 0925 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify Intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. — N° d'immatriculation/d'id provincial:

| | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Package(s) / Contenant: No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | MR | EST 2140 | Kg | 1 | 03 | S41 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Discont.: Pack. Cont. | Discont.: Veh. Veh. |
|---|---|---|---|---|---|---|---|---|
| (i) | | kg | | 06 | | | | |
| (ii) | | | | | | | | |
| (iii) | | | | | | | | |
| (iv) | | | | | | | | |

| | Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 5133503 | 2/15 | 1/1 | 1000 | D05 | C42 | A3150 | H12 | Y42 | N/A | N/A | 3825 61 0010 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wiwcharuk
Signature: DWiwcharuk
Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: ☐ Attached /Ci-joint ☐ As follows/ Ci-contre: CLEAN HARBORS 24HR 519-864-1201 NOTICE EXP. DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10
Time / Heure: ☐ A.M. ☐ P.M. 1115
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) ~~A52202186-001~~ ~~SC PPW 2/26/2009~~ Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | ~~(800) 483-3718~~ | 001202581 FLE |

5. Generator's Name and Mailing Address
**Alliant Tech Systems Inc**
**Route 114**
**Radford, VA 24141**
Generator's Phone: ~~(540) 639-7631~~

Generator's Site Address (if different than mailing address)
**SAME**

6. Transporter 1 Company Name: **Beelman Trucking Company** — U.S. EPA ID Number: **ILR000135236**

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
**Clean Harbors Canada Inc**
**4090 Telfer Road RR#1**
**Corunna, ON N0N 1G0**
Facility's Phone: ~~(519) 864-1021~~

U.S. EPA ID Number: **MIR000035204**

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. **UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III** RQ | 001 | DT | 49000 | P | D030 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 PO# NF49459-5
PDC#486/09
**Burton Prenote 518120 Line 1 expires May 06, 2009. CHESI EPA ID MIR000014630 in Burton, MI is acting as primary exporter for generator.**

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 03 Day 09 Year 09

| TRANSPORTER INTL | 16. International Shipments | ☐ Import to U.S. | ☒ Export from U.S. | Port of entry/exit: Port Huron, MI |
|---|---|---|---|---|
| | Transporter signature (for exports only): | | | Date leaving U.S.: 3-10-09 |

17. Transporter Acknowledgment of Receipt of Materials

| | Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|---|
| | Dennis Ebens | | 03 | 09 | 09 |
| | Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | | |

| DESIGNATED FACILITY | 18. Discrepancy | | | | | |
|---|---|---|---|---|---|---|
| | 18a. Discrepancy Indication Space | ☐ Quantity | ☐ Type | ☐ Residue | ☐ Partial Rejection | ☐ Full Rejection |
| | Manifest Reference Number: | | | | | |
| | 18b. Alternate Facility (or Generator) | | | U.S. EPA ID Number | | |
| | Facility's Phone: | | | | | |
| | 18c. Signature of Alternate Facility (or Generator) | | | | Month | Day Year |

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Darlene Wiechanek | Wiechanek | 03 | 10 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49459-5**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH366608 A52202186-001

(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4FDQC2

Company name / Nom de l'entreprise: Reelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov
Trailer - Rail car No. 1 / 1re remorque - wagon: P-72516 — Prov: In
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — For customs use only
Port of exit / Point de sortie: — International use only

Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Orrais Ferris
Tel. No. / N° de tél.: 800 541-5918
Year / Année: 19 | Month / Mois: 03 | Day / Jour: 10
Signature:

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement documents/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 021202SHFLF

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.:
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 | Month / Mois: 03 | Day / Jour: 10
Time / Heure: 1005 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) s.-cl. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Contenant No. / N° | Packaging/Contenant Code / Code | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211* ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | MR | 21540 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Discont. Pack. Cont. | Discont. Veh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Or / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 5133 | 2/13 | 73 | 1111 | D15 | C42 | A3190 | H14 | Y42 | N/A | N/A | 3925.90.1000 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wiwcharuk
Signature: DWiwcharuk
Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: CLEAN HARBORS 21825
☐ Attached / Ci-joint: ☒ As follows / Ci-contre: 519-869-1201
MONICS EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 03 | Day / Jour: 10
Time / Heure: ☒ A.M. ☐ P.M. 1750
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 | Month / Mois: 03 | Day / Jour: 10

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

A52202186-001 SC PPW 2/26/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202582 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
**Alliant Tech Systems Inc**
**Route 114**
**Radford, VA 24141**
Generator's Phone: **(540) 639-7631**

Generator's Site Address (if different than mailing address)
**SAME**

6. Transporter 1 Company Name: **Beelman Trucking Company** — U.S. EPA ID Number: **ILR000135236**

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
**Clean Harbors Canada Inc**
**4090 Telfer Road RR#1**
**Corunna, ON N0N 1G0**
Facility's Phone: **(519) 864-1021**
U.S. EPA ID Number: **MIR000035204**

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III RQ | 001 | DT | 49000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
AOC# 486/08 COI# NF-49460-3

**Burton Promote 513120 Line 1 expires May 06, 2009. CHESI EPA ID MIR000014530 in Burton, MI is acting as primary exporter for generator.**

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 03 Day: 09 Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Chris Nitcher Date leaving U.S.: 3-10-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Nitcher — Signature: Chris Nitcher — Month: 3 Day: 9 Year: 09
Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wachanuk — Signature: Darlene Wachanuk — Month: 3 Day: 10 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the necessary permits for and will accept the waste the generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49460-3**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH346600B A52202186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

((cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: ENVIRONMENT MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ENV Services Inc

Mailing address / Adresse postale: 4475 Dort Highway | City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

E-mail / Courier électronique: schriner.amanda@cleanharbors.com | Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway

City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4P00C2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Receborse Drive | City / Ville: East Saint Louis | Province: IL | Postal code / Code postal: 62205

E-mail / Courier électronique: N/A | Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P172425 | Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON (customs use only) | Port of exit / Point de sortie (international use only)

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Chris Ritchie | Tel. No. / N° de tél.: 800 541-5918

Year / Année: 09 | Month / Mois: 03 | Day / Jour: 10 | Signature

Reference Nos. of other movement documents/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: (X)1202598ELE

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville | Province | Postal code / Code postal

E-mail / Courier électronique | Tel. No. / N° de tél.

Receiving site address / Adresse du lieu de destination: Same

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc | Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 | City / Ville: Corunna | Province: ON | Postal code / Code postal: N0N 1G0

E-mail / Courier électronique: butler.ann@cleanharbors.com | Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

City / Ville: Corunna | Province: ON | Postal code / Code postal: N0N 1G0

Date received / Date de réception — Year / Année: 09 | Month / Mois: 03 | Day / Jour: 10 | Time / Heure: 1010 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire | Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Contenant No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2111 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 22690 | Kg | 1 | 03 | E 41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pick Cont. | Decont. Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513363 | 3/6 | 77 | 1(m) | D5 | C4) | A3150 | H12 | Y41 | N/A | N/A | 3925.61.00.10 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wischaruk

Signature: DWischaruk | Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: CLEAN HARBORS 24HR

☐ Attached / Ci-joint ☑ As follows / Ci-contre: 519-864-1200, NOTICE DUE DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER | Signature | Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 03 | Day / Jour: 10 | Time / Heure: 1410 ☑ P.M. | Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 | Month / Mois: 03 | Day / Jour: 10

MOE 04-1917 (07/07)

*Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso*

**Copy / Copie 3 (yellow / jaune**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/26/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202583 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company #800-38819 — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
Burton Pronote 518120 Line 1 expires May 06, 2009. CHESI EPA ID MIR000014580 in Burton, MI is acting as primary exporter for generator.
PO# 426/09 CD# NF49440-9

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 03 Day 09 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 3-10-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DAVID MYERS — Signature — Month 03 Day 09 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiecharek — Signature: D. Wiecharek — Month 03 Day 10 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49462-9**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL MIRO00016530

Company name / Nom de l'entreprise: Clean Harbors ~~Env~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courier électronique: schringer.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 )715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: Ont — Postal code / Code postal: N0M 1G0

E-mail / Courier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519 )864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

612D-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Receiborse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courier électronique: N/A — Tel. No. / N° de tél.: 800 )541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | F171840 | IN |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON. — International use only — Port of exit / Point de sortie: — International use only — 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): DAVID MYERS — Tel. No. / N° de tél.: 800 )541-5918

Signature — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: 001202563 FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception 29 — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10 — Time / Heure: 0927 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial 31

| | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 Sub. class(es) / Classe(s) s.u. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / Unités 8 | Packaging / Contenant 9 No. / N° | Packaging / Contenant 9 Codes Int. - ext. | Phys. state / État phys. 10 | Quantity received / Quantité reçue | Units / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 Accepted / Accepté | Shipment / Envoi 34 Refused / Refusé | Decont. 35 Pack. Cont. | Decont. 35 Veh. Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,6-dichlorotoluene) | N/A | N/A | MR | 23100 | Kg | 1 | 03 | Sol | | kg | | 06 | | | | |
| (ii) | | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | | |

| | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 Export / Exportation | National code in country of / Code du pays 18 Import / Importation | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 3/13 | 77 | [illegible] | D5 | Q12 | A3150 | H12 | Y42 | N/A | N/A | 3825.61.00.40 |
| (ii) | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. — Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie) 37: Darlene Wlodarczuk

Signature: Darlene Wlodarczuk — Tel. No. / N° de tél.: 519 8641021

Special handling / Manutention spéciale 22: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: CLEAN HARBORS 24HR 519-864-1201 NOTICE EFF DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets. — Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 20: 810 715-2700

Date shipped / Date d'expédition 21 — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10 — Time / Heure: ☐ A.M. ☒ P.M. 1700 — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

A52202186-001 SC PPW 2/26/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202584 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
**Alliant Tech Systems Inc**
**Route 114**
**Radford, VA 24141**
Generator's Phone: **(540) 639-7631**

Generator's Site Address (if different than mailing address)
**SAME**

6. Transporter 1 Company Name
**Beelman Trucking Company**

U.S. EPA ID Number
**ILR000136236**

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
**Clean Harbors Canada Inc**
**4090 Telfer Road RR#1**
**Corunna, ON N0N 1G0**
Facility's Phone: **(519) 864-1021**

U.S. EPA ID Number
**MIR000035204**

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. **UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III** | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CB348600B ERG#171 CID#
ADC# 4916/08 NF494983

**Burton Pronote 513120 Line 1 expires May 06, 2009. CHESI EPA ID MIR000014580 in Burton, MI is acting as primary exporter for generator.**

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 03 09 09

**TRANSPORTER INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron MI
Transporter signature (for exports only): Date leaving U.S.: 3-10-09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ted Holt
Signature:
Month Day Year: 03 09 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a
Printed/Typed Name: Darlene Wanchard
Signature: D Wanchard
Month Day Year: 03 10 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Alcan Uniloy has the appropriate permits for and will accept this

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49498-3**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR0000016530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 )715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Receiverse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 )541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: P1710 17 — IND.
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ONT. — International use only
Port of exit / Point de sortie — International use only

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Ted Koch — Tel. No. / N° de tél.: 800 )541-5918

Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10 — Signature: Ted Koch

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519 )864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

References Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 001202584FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville — Province — Postal code / Code postal:
E-mail / Courrier électronique — Tel. No. / N° de tél.:
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10 — Time / Heure: 0950 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No./Provincial ID No. / N° d'immatriculation/N°id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging/Containers No. / N° | Packaging/Containers Codes / Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2111 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | ES1 03200 | Kg | 1 | 03 | S 41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Disposal: Proc. / Opt. | Disposal: Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Or / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/10 | 1 | IUU | D05 | C42 | A3150 | H12 | Y42 | N/A | N/A | 3825.10.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wiwcharuk

Signature: Wiwcharuk — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: CLEAN HARBORS 24HR — ☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1301 NOTICE REF DEC 18, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10 — Time / Heure: ☐ A.M. ☒ P.M. 1410 — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 2

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) AB2202186-001 · SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104921 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number: ILR000136236

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
AOC# 486108
CN#NF49386-0
CHEST, EPA ID NO MIR 000014530 IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 19 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Jerry Knapp
Date leaving U.S.: 2.20.09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802
Signature: Jerry Knapp
Month Day Year: 2 19 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Winchank.
Signature: D Winchank
Month Day Year: 02 20 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49386-0**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3496008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

((cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4P0QC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Receiborse Drive — City / Ville: Port Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | P50261 | IN |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON. (international use only) — Port of exit / Point de sortie (international use only)

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Jerry KNAPP — Tel. No. / N° de tél.: 800) 541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20 — Signature: Jerry Knapp

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 00211492 ILE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20 — Time / Heure: 1030 ☒ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sub. | UN No. / N°NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Container No. / N° | Packaging/Container Codes Int'l - Int. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2112 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dichlorotoluene) | N/A | N/A | NR | 22990 | Kg | 1 | 03 | 5 41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. Cont. | Decont. Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 9/10 | 19 | 1000 | D15 | CA0 | A3150 | H12 | Y42 | N/A | N/A | 3926.90.90 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wischarat

Signature: DWischarat — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: ☐ Attached /Ci-joint ☒ As follows/ Ci-contre: CLEAN HARBORS 24HR 519-864-1201 NOTICE EXP DEC 13, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20 — Time / Heure: 1000 ☒ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104922 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS
CN# NF49389-4 THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
ROC# 406/08

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month Day Year: 02 19 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Ray Steff Date leaving U.S.: 2-20-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ray Steff
Signature: Ray Steff
Month Day Year: 02 19 09
Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene W. Wcharuk
Signature: Darlene W. Wcharuk
Month Day Year: 02 20 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49389-4**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CEI486008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIRD000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A5120-4FOQC2

Company name / Nom de l'entreprise: Seelman Trucking Company

Mailing address / Adresse postale: 1 Raceborse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800 541-5916

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P171844
Registration No. / N° d'immatriculation
Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. (international use only)
Port of exit / Point de sortie: (international use only)

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Ron Seelman
Tel. No. / N° de tél.: 800 541-5916

Year / Année: 09 | Month / Mois: 02 | Day / Jour: 20
Signature: Ron Seelman

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 003104922 FLC

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.:
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 20
Time / Heure: 1035 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) s.-cl. | UN No. / N° NU | Packing / Nat. gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging / Contenant — No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | GS 23010 | Kg | 1 | 03 | S41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Shipment / Envoi — Refused / Refusé | Decont. — Pack. Cont. | Decont. — Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 9/15 | 20 | 1000 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wiwcharuk
Signature: DWiwcharuk
Tel. No. / N° de tél.: 519 864 1021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint: ☐ As follows / Ci-contre: CLEAN HARBORS 24HR: 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 20
Time / Heure: 1715 ☐ A.M. ☐ P.M.
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 20

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202188-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104923 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 48000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO. MIR 000014530, IS ACTING AS THE
AOC# 406/08 PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CNF NF463977

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 19 09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 2-20-09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Clayton Stephen Sr
Signature: Clayton Stephen
Month Day Year: 12 19 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wuchanuk
Signature: Darlene Wuchanuk
Month Day Year: 02 20 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

**NF49397-7**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor — Producteur / expéditeur — 1
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc
Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529
E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700
Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu — 2
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A-031806
Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0
E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021
Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier — Transporteur — 25
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: AS120-4PUQC2
Company name / Nom de l'entreprise: Beelman Trucking Company
Mailing address / Adresse postale: 1 Beelman Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205
E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | P 12326 | IN |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON — International use only
Port of exit / Point de sortie — International use only — 25

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* — 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Clayton Stephenson
Tel. No. / N° de tél.: 800)541-5918
Year / Année: 09 — Month / Mois: 12 — Day / Jour: 20
Signature:

**C** Receiver / consignee — Réceptionnaire / destinataire — 3
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifeste utilisés — 27: 22054923 FLE

Receiver / consignee information same as in Part A
Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 20 — 29
Time / Heure: 11:20 ☒ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire — 30
Registration No./Provincial ID No. — N° d'immatriculation/d'id provincial — 31

| | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée 8 | Units / L or / ou Kg / Unités | Packaging/Container / No. / N° 9 | Codes / Int. – ext. | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | 2117 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dichlorotoluene) | N/A | N/A | MR | EST 22271 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 — Accepted / Accepté | Refused / Refusé | Decont. 35 — Pack. Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|---|
| (i) | | Kg | | 06 | | | | |
| (ii) | | | | | | | | |
| (iii) | | | | | | | | |
| (iv) | | | | | | | | |

| | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code É ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 5333 | 01 | 24 | 1100 | D05 | Y42 | A3160 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) — 36

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wincharuk — 37
Signature: Darlene Wincharuk
Tel. No. / N° de tél.: 5199864021

Special handling / Manutention spéciale: CLEAN HARBORS STILL — 22
☐ Attached /Ci-joint ☒ As follows/ Ci-contre: 519-864-1201
NOTICE DUE DEC 13, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — 20
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — 21 — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 20 — Time / Heure: ☒ A.M. ☐ P.M. 1100
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 20

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

A52202186-001 SC PPW 2/10/2009

Form Approved. OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1210020730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 483-3716 | 4. Manifest Tracking Number 002104924 FLE |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49500 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AOC# 486/08
CN#NF493806 AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month/Day/Year: 02/19/09

**INT'L**

16. International Shipments — ☐ Import to U.S. ☒ Export from U.S. — Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Bryan Heck — Date leaving U.S.: 2-20-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bryan Heck — Signature: Bryan Heck — Month/Day/Year: 02/19/09

Transporter 2 Printed/Typed Name — Signature — Month/Day/Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk — Signature: Darlene Wiwcharuk — Month/Day/Year: 02/20/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49388-6**

*This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.*
*Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.*

CH348600B A52202186-001

(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

## A Generator / consignor — Producteur / expéditeur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: MIR000014530

ENVIRONMENTAL (KB)

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: (810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

## B Carrier — Transporteur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: AB120-4PUQC2

Company name / Nom de l'entreprise: Boelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: (800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: P171010 IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. (International use only)
Port of exit / Point de sortie (International use only)

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print): Nom de l'agent autorisé (caractères d'imprimerie): BRYAN HECK
Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 | Month / Mois: 02 | Day / Jour: 20 | Signature: Bryan Heck

## C Receiver / consignee — Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 09104924 FILE

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial:

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année | Month / Mois | Day / Jour
Time / Heure ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. — N° d'immatriculation/d'id provincial:

| (i) Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe, Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging/Contenant No. / N° | Packaging/Contenant Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 23610 | Kg | 1 | Q3 | S41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. / Cont. | Decont. Vi |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

| (i) Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 5133303 | 2/10 | 21 | 1000 | D05 | C42 | A3190 | H13 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

International use only

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete.
Attestation du réceptionnaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print): Nom de l'agent autorisé (caractère d'imprimerie)
Signature
Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR#
☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete.
Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print): Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 20
Time / Heure ☒ A.M. ☐ P.M. 0900
Scheduled arrival date / Date d'arrivée pr — Year / Année: 09 | Month / Mois: 02 | Day: 2

MOE 04-1917 (07/07)

Instructions for completion and distribution on *reverse* / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blan**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 853202186-001 SC FPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104925 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS THE
AOC#496107 PRIMARY Exporter on Behalf of the Generator
CN#NF49392-8

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 02 Day 19 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron MI
Transporter signature (for exports only): Date leaving U.S.: 2-20-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Mattingly — Signature — Month 02 Day 19 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk — Signature — Month 02 Day 20 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49392-8**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport. (cana) 11/17/2005

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530 ENVIRONMENTAL

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: (810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: 35822 8171609 — Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. (international use only) — Port of exit / Point de sortie (international use only)

Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Richard Mattingly — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20 — Signature:

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial:

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifeste utilisés: 00210492SFLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception: Year / Année — Month / Mois — Day / Jour — Time / Heure: ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage/ de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Container No. / N° | Codes Int'l - ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 2326D | Kg | 1 | 03 | 2 41 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| | Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 2/13 | 23 | 1000 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3925.60.00.10 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

Quantity received / Quantité reçue — Units / L or / ou Kg / Unités — Comments / Commentaires — Handling Code / Code de manutention — Shipment Accepted / Accepté — Shipment Refused / Refusé — Decont Pack. / Cont.

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

Receiver / consignee certification : I certify that the information contained in Part C is correct and complete / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No / N° de tél. ( )

Special handling / Manutention spéciale: ☐ Attached /Ci-joint ☒ As follows/ Ci-contre: CLEAN HARBORS 248R# 519-864-1201 NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20 — Time / Heure: 0900 ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanc**

A5220218G-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104926 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 48000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS ON# NF493969 the Primary EXPORTER ON BEHALF OF THE GENERATOR
AOC# 486/08

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
*I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.*

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month/Day/Year: 02/19/09

**TR ANSPORTER INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): James Kinney — Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JAMES KINNEY 678-38813 — Signature: James Kinney — Month/Day/Year: 02/19/09

Transporter 2 Printed/Typed Name — Signature — Month/Day/Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiecharuk — Signature: Darlene Wiecharuk — Month/Day/Year: 02/20/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49396-9**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
*Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.*

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

## A Generator / consignor — Producteur / expéditeur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: MIR000014530

ENVIRONMENTAL (C9)

Company name / Nom de l'entreprise: Clean Harbors ~~Env~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810, 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519, 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

## B Carrier — Transporteur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800, 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P171740
Registration No. / N° d'immatriculation
Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry — Point d'entrée: SARNIA, ON (Canada only)
Port of exit — Point de sortie: (information use only)

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print): Nom de l'agent autorisé (caractères d'imprimerie): JAMES KINNEY
Tel. No. / N° de tél.: 800, 541-5918

Year / Année: 09 | Month / Mois: 02 | Day / Jour: 20
Signature: James Kinney

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifeste utilisés: 002104926 FLE

## C Receiver / consignee — Réceptionnaire / destinataire

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial:

Receiver / consignee information same as in Part A
Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année | Month / Mois | Day / Jour:
Time / Heure: ☐ AM ☐ PM

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire

Registration No./Provincial ID No / N° d'immatriculation/d'id provinci

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Lor / ou Kg / Unités | Packaging/Containers — No. / N° | Codes / Int – ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 21420 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Lor / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Refused / Refusé | Decontaminated / Décontaminé |
|---|---|---|---|---|---|---|
| | | | | | | |

If handling code "Other" (specify)
Si code de manutention « autre » (spécifier)

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/10 | 22 | 1000 | D05 | C42 | A3190 | ~~H12~~ | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie):

Signature:
Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR#
☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete.*
*Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER

Signature:

Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 20
Time / Heure: ☐ A.M. ☒ P.M. 1737

Scheduled arrival date / Date d'arrivée p — Year / Année: 09 | Month / Mois: 02 | Day: 22

MOE 04-1917 (07/07)

*Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso*

**Copy / Copie 1 (white / blan**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 452202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104927 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH248600B ERG#171 CHESI, EPA ID NO MIR 000014530, IS ACTING
AOC#482/09 AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CO# NF4330-2

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month/Day/Year: 02/19/09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Steven M Wysocki Date leaving U.S.: 2.20.09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Steven M Wysocki
Signature: Steven M Wysocki
Month/Day/Year: 2/19/09
Transporter 2 Printed/Typed Name:
Signature:
Month/Day/Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month/Day/Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H130. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nicole Farr
Signature: Nicole Farr
Month/Day/Year: 2/20/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001 (cans) 11/17/2005

**NF49390-2**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor — Producteur / expéditeur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL (sic) MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ~~Environmental~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu 2 — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: Clean Harbors Canada Inc — A-031606

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1GO

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1GO

**B** Carrier — Transporteur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 15: A8120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1e remorque - wagon: P171839 — IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON — International use only — Port of exit / Point de sortie: International use only 25

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Steven M Wysocki — Tel. No. / N° de tél: 800) 541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20 — Signature: Steven M Wysocki

**C** Receiver / consignee — Réceptionnaire / destinataire — Registration No / Provincial ID No. — N° d'immatriculation - d'id. provincial

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 00210492TFLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél. ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année — Month / Mois — Day / Jour — Time / Heure 29 — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. N° d'immatriculation/d'id provincial

| | Prov. code / Code prov 3 | Shipping name / Appellation réglementaire 4 | Class / Classe Sub. class(es) / Classe(s) sub. 5 | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage/ de risque 7 | Quantity shipped / Quantité expédiée 8 | Units / L or / ou Kg / Unités 8 | Packaging/Container / No. / N° 9 | Codes / Int. – ext. 9 | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 45T 22760 | Kg | 1 | 03 | S 41 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi Accepted / Accepté 34 | Shipment / Envoi Refused / Refusé | Decont. 35 Pack. Cont. | Veh. |
|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | |
| (ii) | | | | | | | | |
| (iii) | | | | | | | | |
| (iv) | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

| | Notice No. / N° de notification 11 | Notice Line No / N° de ligne de la notification | Shipment Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 2/10 | 26 | 1000 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) 37

Signature — Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR# 22
☐ Attached /Ci-joint: ☒ As follows/ Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 20: 810 715-2700

21 Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20 — Time / Heure: ☒ A.M. 1050 ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 20

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanche)**

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020790 | 1 | (800) 483-3718 | 002104928 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON NON 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING
NOC#486108 CN#NF493985
AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 19 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S.
Transporter signature (for exports only):
Port of entry/exit: Port Huron, MI
Date leaving U.S.: 2-20-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ted Koch
Signature:
Month Day Year: 02 19 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)

Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiscraruk
Signature:
Month Day Year: 02 20 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486608 AS2202185-001

(Canada) 11/17/2005

**NF49398-5**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.ann@cleanharbors.com — Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Petrolia — Province: ON — Postal code / Code postal: N0N 1R0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Petrolia — Province: ON — Postal code / Code postal: N0N 1R0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: A8129-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Beehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1re remorque - wagon: P17017 — Prov.: Ind.

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON — International use only

Port of exit / Point de sortie — International use only — 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Steve Kish — Tel. No. / N° de tél.: 800)541-5916

Year / Année: 05 — Month / Mois: 12 — Day / Jour: 20 — Signature: Steve Kish

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: (D)5104 CON-FIE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de désignation: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 20 — Time / Heure 29: 1110 ☒ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe Sub. class(es) / Classe(s) sub. 5 | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage/ de risque 7 | Quantity shipped / Quantité expédiée 8 | Units / L or / ou Kg / Unités 8 | Packaging/Container No. / N° 9 | Packaging/Container Codes / Int. - ext. 9 | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 9217 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 53410 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue 31 | Units / L or / ou kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 Accepted / Accepté | Shipment / Envoi 34 Refused / Refusé | Decont. 35 Pack. Cont. | Decont. 35 Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |
| | | | | | | | |
| | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification 11 | Shipment / Envoi 12 | OI / De 12 | D or R code / Code É ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation 18 | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | | | | |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. 37

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wiechanik

Signature: DWiechanik — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale 22: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201 CLEAN HARBORS JEWEL NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets. 20

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition 21 — Year / Année: 05 — Month / Mois: 12 — Day / Jour: 20 — Time / Heure ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 05 — Month / Mois: 12 — Day / Jour: 20

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A82202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104931 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company #800-38819

U.S. EPA ID Number
ILR000135239

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B
POC#486108
ERG#171
CHESI, EPA ID NO MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CAN# NF49395-1

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 02 Day: 20 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): David Myers Date leaving U.S.: 2.21.09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DAVID MYERS
Signature: David Myers
Month: 2 Day: 20 Year: 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H130 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Farr
Signature: Nicole Farr
Month: 2 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49395-1**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIRD00016536

Company name / Nom de l'entreprise: Clean Harbors Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner-amanda@cleanharbors.com
Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc
Registration No. / Provincial ID No / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: A8120-49UQCZ

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800) 541-5916

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | P171540 | |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON. (international use only)
Port of exit / Point de sortie: (international use only) 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): David Myers
Tel. No. / N° de tél.: 800 )541-5916

Year / Année: 2 0 1 9 | Month / Mois: 0 1 2 | Day / Jour: 1 1 | Signature:

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: (illegible)

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise
Mailing address / Adresse postale
City / Ville | Province | Postal code / Code postal
E-mail / Courrier électronique | Tel. No. / N° de tél. ( )
Receiving site address / Adresse du lieu de destination

Date received / Date de réception: Year / Année | Month / Mois | Day / Jour
Time / Heure 29: ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 32
Registration No./Provincial ID No. / N° d'immatriculation/id. provincial

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe Sub. class(es) / Classe(s) sub. 5 | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging / Contenant No. / N° 9 | Codes Int. – ext. | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2111 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | MR | 451 244(a) | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont. 35: Pack. Cont. | Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 2/10 | 27 | 11/17/2005 | D5 | Q2 | A3150 A12 | Y41 | | N/A | N/A | 3824.10.10.10 |
| (ii) | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. 37

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature | Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale 22: CLEAN HARBORS 24HRS
☐ Attached / Ci-joint: ☒ As follows / Ci-contre: 519-864-1301
NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets. 20

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER

Signature

Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition 21: Year / Année: 2 0 0 5 | Month / Mois: 1 1 | Day / Jour: 1 7
Time / Heure: ☐ A.M. ☐ P.M.
Scheduled arrival date / Date d'arrivée prévue: Year / Année: 0 0 | Month / Mois: 0 1 | Day / Jour: 0 2

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3719 | 002104932 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH3486008 ERG#171 CHESI, EPA ID NO MIR000014530 IS ACTING AS
PO#4500109 the primary exporter on behalf of the generator
COI# NF49393-16

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 19 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S.
Transporter signature (for exports only): Dennis Ebers
Port of entry/exit: PORT Huron, MI
Date leaving U.S.: 2/21/09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Dennis Ebers
Signature: Dennis Ebers
Month Day Year: 02 20 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H135 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Farr
Signature:
Month Day Year: 02 20 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49393-6**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CB3486098 A52202106-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Blank) 12/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIR000014520

Company name / Nom de l'entreprise: Clean Harbors MI Services Inc

Mailing address / Adresse postale: 9415 Dort Highway — City / Ville: Flint — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: (810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 9415 Dort Highway

City / Ville: Avalon — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606

Mailing address / Adresse postale: 6490 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: miller.andy@cleanharbors.com — Tel. No. / N° de tél.: 519)862-1021

Receiving site address / Adresse du lieu de l'expédition: 6490 Telfer Road RR#1

City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: A8120-490QC2

Company name / Nom de l'entreprise: Seiman Trucking Company

Mailing address / Adresse postale: 1 Rarelorge Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1re remorque - wagon: [illegible] — Prov.: [illegible]

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON — International use only

Port of exit / Point de sortie — International use only 25

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): [illegible] — Tel. No. / N° de tél.: 800 )541-5918

Year / Année | Month / Mois | Day / Jour | Signature: [signature]

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: DOMESTIC

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception: Year / Année | Month / Mois | Day / Jour — Time / Heure 29 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / Rak gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / Unités | Packaging/Contenant 9 No. / N° | Codes | Phys. state / État phys. 10 | Quantity received / Quantité reçue | Units / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 Accepted / Accepté | Refused / Refusé | Decont. 35 Pack. / Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 9111 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | MB | [illegible] | Kg | 1 | 03 | S | | | | | | | | |
| (ii) | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | [illegible] | P/R | 99 | [illegible] | [illegible] | A3180 | H12 | Y42 | N/A | N/A | 3824.90.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

international use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.* 37

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale 22: CLEAN HARBORS 24HR#
☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-862-1201
NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.* 20

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature: [signature] — Tel. No. / N° de tél.: 810 715-2700

21 Date shipped / Date d'expédition: Year / Année | Month / Mois | Day / Jour: 05 12 21 — Time / Heure: ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue: Year / Année | Month / Mois | Day / Jour: 06 12 21

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104933 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135239

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CHE486008 ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AS
AOC# 496/08 the primary exporter on behalf of the generator
CN#NF49391-0

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 02 Day: 19 Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 20 (2)

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Nitchea
Signature:
Month: 2 Day: 20 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H120 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Farr
Signature:
Month: 02 Day: 20 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49391-0**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CB348600B AS2202106-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Canada) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors-Env Services Inc

Mailing address / Adresse postale: 1475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 1475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 2: A-031606

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courier électronique: mitter.ann@cleanharbors.com — Tel. No. / N° de tél.: (519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: AB120-4FUXX2

Company name / Nom de l'entreprise: Realman Trucking Company

Mailing address / Adresse postale: 1 Recherche Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5919

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: Registration No. / N° d'immatriculation: P172425 — Prov. 24: IN

Trailer - Rail car No. 2 / 2e remorque - wagon

Port of entry / Point d'entrée: SARNIA, ON — International use only

Port of exit / Point de sortie — International use only 25

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Chris Nitcher — Tel. No. / N° de tél.: 800)541-5919

Year / Année: 09 — Month / Mois: 12 — Day / Jour: 21 — Signature: Chris Nitcher

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 2221641-55716 27

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception: Year / Année — Month / Mois — Day / Jour — Time / Heure 29 — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No. / Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging / Contenant 9 — No. / N° | Codes | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2,4-DINITROTOLUENE, ENVIRONMENTALLY HAZARDOUS WASTE | N/A | N/A | NR | 2,537 | Kg | 1 | 03 | 241 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling / Code / Code de manutention 33 | Shipment / Envoi 34 — Accepted / Accepté | Refused / Refusé | Decont. 35 — Pack. / Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 1 | EXP | MOE | D99 | C42 | A1010 | H12 | Y34 | N/A | N/A | 3825.41.00.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.* — Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) 37

Signature — Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale 22: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: CLEAN HARBORS 24Hr 519-864-1202 NOTICE DO DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.* — Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700 20

Date shipped / Date d'expédition 21: Year / Année: 05 — Month / Mois: 12 — Day / Jour: 21 — Time / Heure: ☐ A.M. ☐ P.M. 1515 — Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 — Month / Mois: 12 — Day / Jour: 21

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

A5220216800-001 SG PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104934 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 48000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. CHB48600E ERG#171 CHESI, EPA ID NO MIR 000014530, IS ACTING AOC# 486108 AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
COC# NF49409-0

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 02 Day: 19 Year: 09

**TRANSPORTER INT'L**

16. International Shipments
☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Kurt Netemeyer
Date leaving U.S.: 2-21-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Kurt Netemeyer | Kurt Netemeyer | 2 | 20 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Nicole Fox | Nicole Fox | 2 | 20 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49409-0**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CK3486008 A52302166-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Canada) 11/17/2005

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR0000014536

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4879 Dort Highway
City / Ville: Flint
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: scheiner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4879 Dort Highway

City / Ville: Flint
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: carlos.ann@cleanharbors.com
Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road #291

City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A9120-6PDQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Beelman Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule
Trailer - Rail car No. 1 / 1re remorque - wagon: P-11022
Registration No. / N° d'immatriculation
Prov.: IL
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ONT. (International use only)
Port of exit / Point de sortie: (International use only)

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Kurt Meremeyer
Tel. No. / N° de tél.: 800)541-5918

Year / Année: 0 9 | Month / Mois: 0 2 | Day / Jour: 2 1 | Signature:

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 021A 1491 15

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial:

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année | Month / Mois | Day / Jour
Time / Heure ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / Risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging / Contenant: No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2110 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dichlorotoluene) | N/A | N/A | NR | 2000 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Refused / Refusé | Decont.: Pack. Cont. | Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | N/A | 1 | 000 | D05 | C01 | A1010 | H12 | Y42 | N/A | N/A | 3825 61 00 00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete / Attestation du réceptionnaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie):
Signature:
Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale
☐ Attached / Ci-joint ☒ As follows / Ci-contre: CLEAN HARBOR 24 HRS 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete.*
*Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHEINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 0 9 | Month / Mois: 1 2 | Day / Jour: 2 1
Time / Heure ☐ A.M. ☐ P.M.
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 0 9 | Month / Mois: 1 2 | Day / Jour: 2 1

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A522021dd-001 SC PFW 2/10/2009 Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104935 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600E ERG#171 OHESI, EPA ID NO MIR000014530, IS ACTING AS
AOC#486/08
CN# NF49399-3 the Primary Exporter on behalf of the generator.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 02 Day 19 (20) Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Paul Dundon — Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: PAUL DUNDON — Signature: Paul Dundon — Month 2 Day 20 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H130 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Farr — Signature: Nicole Farr — Month 2 Day 20 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49399-3**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

## A Generator / consignor / Producteur / expéditeur

1 Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIP0000034836

Company name / Nom de l'entreprise: Clean Harbors Environmental Services Inc

Mailing address / Adresse postale: 4415 Bell Highway
City / Ville: Wayne
Province: MI
Postal code / Code postal: 48529

E-mail / Courier électronique:
Tel. No. / N° de tél.: 810) 725-2700

Shipping site address / Adresse du lieu de l'expédition: 4415 Bell Highway

City / Ville: Wayne
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: 2
Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: K-071806

Mailing address / Adresse postale: 6090 Dolph Road East
City / Ville: Niagara Falls
Province: ON
Postal code / Code postal: L2G 1G8

E-mail / Courier électronique:
Tel. No. / N° de tél.: 905)994-1321

Receiving site address / Adresse du lieu de l'expédition: 6090 Dolph Road East

City / Ville: Niagara Falls
Province: ON
Postal code / Code postal: L2G 1G8

## B Carrier / Transporteur

23 Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: AB120-47KKC2

Company name / Nom de l'entreprise: Redimen Trucking Company

Mailing address / Adresse postale: 1 Receivers Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courier électronique: N/A
Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1e remorque - wagon: D50612 — TN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: (International use only)

Port of exit / Point de sortie: (International use only) 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Gail Dunson
Tel. No. / N° de tél.: 800)563-5915

Year / Année: 2012 | Month / Mois: 12 | Day / Jour: 20 | Signature:

## C Receiver / consignee / Réceptionnaire / destinataire

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 28

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Reference Nos. of other movement documents(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 27 (illegible)

Date received / Date de réception — Year / Année | Month / Mois | Day / Jour

Time / Heure: 29 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire: 30

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging/Container / No. / N° | Codes | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | Waste environmentally hazardous liquid, flammable, n.o.s. (2,4-dimethylphenol) | 3 | NA | PG II | 13240 | KG | 1 | 03 | Syl |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling / Code / Code de manutention 33 | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont.: Pack. / Cont. | Decont.: Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code E ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | | | | |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier): 36

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. 37

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature

Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR 22
☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-869-1201
NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets. 20

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER

Signature

Tel. No. / N° de tél.: 810 725-2700

21 Date shipped / Date d'expédition — Year / Année | Month / Mois | Day / Jour: 12 | 21

Time / Heure: ☐ A.M. ☒ P.M.

Scheduled arrival date / Date d'arrivée prévue — Year / Année | Month / Mois | Day / Jour: 12 | 22

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 45220218G-001 50 PFW 2-10-2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104936 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 48000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. CE3486GE ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS
AOC# 496108 THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
COA NF49394-4

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month: 02 Day: 20 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Gary Conway Date leaving U.S.: 2-21-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: GARY CONWAY — Signature: Gary Conway — Month: 02 Day: 20 Year: 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nicole Farr — Signature: Nicole Farr — Month: 02 Day: 20 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49394-4**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CK3486008 A52202186-001 (cans) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000814530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4975 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4975 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ONT
Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4PUQC2

Company name / Nom de l'entreprise: Reelmen Trucking Company

Mailing address / Adresse postale: 1 Morehorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800) 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | | |
| Trailer - Rail car No. 2 / 2e remorque - wagon | PT8547 | MO |

Port of entry / Point d'entrée (international use only): SARNIA, ONT.
Port of exit / Point de sortie (international use only):

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): GARY CONWAY
Tel. No. / N° de tél.: 800)541-5918
Year / Année: 09 | Month / Mois: 12 | Day / Jour: 21
Signature: Gary Conway

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 0321473-FTC

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial:

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année | Month / Mois | Day / Jour
Time / Heure ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| (i) Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging / Conditionnement No. / N° | Packaging / Conditionnement Codes Int.–ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2317 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dimitrotoluene) | N/A | N/A | NE | 23620 | Kg | 1 | D2 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. / Cont. | Decont. Veh / Véh |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| (i) | Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Or / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513202 | N/A | 55 | | D5 | C13 | A3150 | H12 | Y39 | N/A | N/A | 3825.61.010 |
| (ii) | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie):
Signature:
Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HRS
☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete.
Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 12 | Day / Jour: 21
Time / Heure ☐ A.M. ☐ P.M.
Scheduled arrival date / Date d'arrivée prévu — Year / Année: 09 | Month / Mois: 12 | Day / Jour: 21

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaur**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A522021866001 SC PPW 2/10/2009 Form Approved, OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3713 | 002104937 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING
AOC# 486/08
CA# NF49407-4 AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 02 Day: 19 Year: 09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT Huron, MI
Transporter signature (for exports only): Leslie Zahnow
Date leaving U.S.: 02-23-09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leslie Zahnow
Signature: Leslie Zahnow
Month: 02 Day: 20 Year: 09
Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nicole Farr
Signature: Nicole Farr
Month: 02 Day: 23 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49407-4**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport. CH348600B A52202186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(Canada) 11/17/2005

**A Generator / consignor / Producteur / expéditeur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIR000014530

Company name / Nom de l'entreprise: Environmental Clean Harbors Env. Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810, 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway

City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519, 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B Carrier / Transporteur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: A8120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800, 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | P72535 | JV |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON — Canada only — Port of exit / Point de sortie: International use only 25

Carrier Certification / Attestation du transporteur 26: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Leslie Schriner — Tel. No. / N° de tél.: 800, 541-5918

Year / Année: 09 — Month / Mois: 12 — Day / Jour: 23 — Signature

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: 0021049377FLE

**C Receiver / consignee / Réceptionnaire / destinataire** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception 29: Year / Année — Month / Mois — Day / Jour — Time / Heure ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No. / Provincial ID No. / N° d'immatriculation/d'id provincial

| | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe Sub. class(es) / Classe(s) sub. 5 | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée 8 | Units / L or / ou Kg / Unités 8 | Packaging / Contenant No. / N° 8 | Packaging / Contenant Codes Int – ext. 8 | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | ON | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 23200 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi Accepted / Accepté 34 | Shipment / Envoi Refused / Refusé | Decont. / Pack. Cont. | Decont. / Veh Véh |
|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | |
| (ii) | | | | | | | | |
| (iii) | | | | | | | | |
| (iv) | | | | | | | | |

| | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation 18 | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 2/18 | 34 | 1000 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

Receiver / consignee certification / Attestation du réceptionnaire / destinataire: I certify that the information contained in Part C is correct and complete. / J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale: CLEAN HARBOR 24 HR#

☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201

NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 810 715-2700 20

21 Date shipped / Date d'expédition: Year / Année 09 — Month / Mois 12 — Day / Jour 23 — Time / Heure ☐ A.M. ☒ P.M. MID

Scheduled arrival date / Date d'arrivée prévu: Year / Année 09 — Month / Mois 12 — Day / Jour 23

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanc)**

A52202106.001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104938 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH048600E ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS the primary exporter on behalf of the Generator
Acct#4[illegible]/09
Coll# NF4994U-C

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 10 Day: 21 Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 2-23-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Edward Beelman Jr.
Signature:
Month: 02 Day: 23 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Farr
Signature:
Month: 02 Day: 25 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

# EMENT DOCUMENT / MANIFEST
# :UMENT DE MOUVEMENT / MANIFESTE

NF49411-6

:ment documentaire/test conforms to all federal
...rovincial transportation and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations
fédérale et provinciale sur l'environnement et le transport. (cana) 11/17/2005

CH348600B AS2202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIR000014530

Environmental

Company name / Nom de l'entreprise: Clean Harbors Env. Services Inc

Mailing address / Adresse postale: 4175 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: (810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4175 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.am@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: A8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Receiverse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1re remorque - wagon: P171711 — IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — International use only — Port of exit / Point de sortie: International use only 25

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Ed Niedbalski — Tel. No. / N° de tél.: 800) 541-5918

Year / Année: 0 9 — Month / Mois: 0 2 — Day / Jour: 2 3 — Signature: Ed Niedbalski

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifeste utilisés 2: 00210A938FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception 29: Year / Année — Month / Mois — Day / Jour — Time / Heure ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Pcs code / Code pcs 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging / Contenant 9 No. / N° | Codes | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (a) 2119 | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 657 21490 | Kg | 1 | 03 | S 41 |
| (b) | | | | | | | | | |
| (c) | | | | | | | | | |
| (d) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi Accepted / Accepté 34 | Shipment / Envoi Refused / Refusé 34 | Decont. Pack. / Cont. 35 | Decont. Veh. / Véh. 35 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification 11 | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) 513303 | 2/18 | 33 | 1000 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (b) | | | | | | | | | | | |
| (c) | | | | | | | | | | | |
| (d) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) 37

Signature — Tel. No. / N° de tél. ( )

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER

Signature

Tel. No. / N° de tél. 20: (810) 715-2700

Special handling / Manutention spéciale 22: CLEAN HARBOR 24 HR# — ☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201 NOTICE EXP DEC 15, 2009

21 Date shipped / Date d'expédition: Year / Année 0 9 — Month / Mois 0 2 — Day / Jour 2 3 — Time / Heure ☐ A.M. ☒ P.M. 1700 — Scheduled arrival date / Date d'arrivée prévue: Year / Année 0 9 — Month / Mois 0 2 — Day / Jour 2 3

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanche**

A5220218G-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3716 | 002104940 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON NON 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CHC48600B ERG#171 CHESI, EPA ID NO MIR 000014530, IS ACTING AS THE
AUC# 4966/09 PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CAN# NF49414-0

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 02 Day 23 Year 09

**TRANSPORTER INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 2-24-09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: RAY SNEE — Signature — Month 02 Day 23 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H130 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Fox — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49414-0**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport. (cana) 11/17/2005

CH348600B A52202186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: ENVIRONMENTAL MIK000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: P171844 — IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ONT. (customs use only) — Port of exit / Point de sortie (international use only)

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Ron Stiff — Tel. No. / N° de tél.: 800) 541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24 — Signature: Ron Stiff

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial:

Reference Nos. of other movement documents/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 002104940FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courier électronique: — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

E-mail / Courier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

Date received / Date de réception — Year / Année: — Month / Mois: — Day / Jour: — Time / Heure: — ☐ A.M ☐ P.M

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincia

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage/ de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging / No. / N° | Container Codes / Int.–ext. | Phys. state / Etat phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 23340 | Kg | 1 | 06 | S41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decon Pack. / Cont. |
|---|---|---|---|---|---|---|
| | | | | | | |

| Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment Envo | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/15 | 35 | 1000 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie):

Signature: — Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR#
☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature: — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24 — Time / Heure: 1734 — ☐ A.M ☐ P.M

Scheduled arrival date / Date d'arrivée prév — Year / Année: 09 — Month / Mois: 02 — Day / J: 2[illegible]

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanc**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 452202186-001 SC FFW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104941 FLE |

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CHS486008 ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR.
ACC# 48616/08
CIOH NF4941 9-9

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 23 09

TRANSPORTER INTL

16. International Shipments
☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Clayton Stephenson Date leaving U.S.: 02/24/09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Clayton Stephenson
Signature: Clayton Stephenson
Month Day Year: 2 23 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H130 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nicole Farr
Signature: Nicole Farr
Month Day Year: 02 24 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49419-9**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A Generator / consignor / Producteur / expéditeur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL (AB) MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ~~Env~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2 — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606

Clean Harbors Canada Inc

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ~~ON~~ — Postal code / Code postal: ~~NON 1G0~~

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

**B Carrier / Transporteur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

~~A9120-4~~ 8120-4RUSCA

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: Bear Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1e remorque - wagon: 72536 — IM

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée (International use only): SARNIA, ON. — Port of exit / Point de sortie (International use only) 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 28

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Clayton Stephenson — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 02 — Month / Mois: 02 — Day / Jour: 24 — Signature:

**C Receiver / consignee / Réceptionnaire / destinataire** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 25

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 22104941FILE 27

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale — City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception — Year / Année — Month / Mois — Day / Jour — Time / Heure ☐ A.M. ☐ P.M. 29

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| (i) Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging / Contenant No. / N° 9 | Codes Int – ext. | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 22430 | Kg | 1 | 06 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi Accepted / Accepté 34 | Shipment / Envoi Refused / Refusé 34 | Decont. Pack. / Cont. 35 | Decont. Veh. / Véh. 35 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/8 | 40 | 1000 | D05 | C42 | A3150 | H12 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. 37

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale 22 — ☐ Attached / Ci-joint: ☒ As follows / Ci-contre: CLEAN HARBORS 24HRS 519-864-1201 NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 20: 810 715-2700

21 Date shipped / Date d'expédition: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24 — Time / Heure: 1933 ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanche**

A5220216G-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104942 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CHB48600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR.
POC# 436108
CIO#NF49417-3

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY:H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 02 Day: 23 Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Bryan Heck Date leaving U.S.: 2-23-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: BRYAN HECK
Signature: Bry Heck
Month: 02 Day: 23 Year: 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Fox
Signature
Month: 02 Day: 24 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49417-3**

*This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.*
*Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.*

CH348600B A52202186-001

(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ~~Environmental~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway | City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com | Tel. No. / N° de tél.: (810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway | City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc | Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 | City / Ville: Corunna | Province: ON | Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com | Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 | City / Ville: Corunna | Province: ON | Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: [illegible] 8120-4FU0CA

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Rechnise Drive | City / Ville: East Saint Louis | Province: IL | Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A | Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.

| | | |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | P171010 | IN |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON. (International use only) | Port of exit / Point de sortie (International use only)

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Bryan Heck | Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 | Month / Mois: 02 | Day / Jour: 24 | Signature: Bryan Heck

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 000104942FIE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A — ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise | Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal | E-mail / Courrier électronique | Tel. No. / N° de tél. ( ) | Receiving site address / Adresse du lieu de destination

Date received / Date de réception — Year / Année | Month / Mois | Day / Jour | Time / Heure ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire | Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| (i) Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe | Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / Risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging/Container No. / N° | Codes Int – ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | | N/A | NR | 23410 | Kg | 1 | 06 | S41 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. / Cont. | Decont. Ve / Vi |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code E ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/18 | 30 | 1000 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.101.0000 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature | Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale — ☐ Attached / Ci-joint: ☒ As follows / Ci-contre: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER | Signature | Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 24 | Time / Heure ☐ A.M. ☐ P.M. | Scheduled arrival date / Date d'arrivée prévu — Year / Année: 09 | Month / Mois: 02 | Day / Jo: 24

MOE 04-1917 (07/07)

*Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso*

**Copy / Copie 1 (white / blanc)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 452202186-001 SC PRW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104943 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000136236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
AOC#4916/08
CO#NF49412-4

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 02 Day 23 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Mattingly — Signature — Month 02 Day 23 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H130 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Fox — Signature — Month 02 Day 23 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport. (cana) 11/17/2005

CH348600B AS2202186-001

**NF49412-**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENT MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ~~Env~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: (810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway

City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

~~AB120-4~~ 8120-4FUQCS

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: (800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1re remorque - wagon: 388582 P171009 — IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON — International use only

Port of exit / Point de sortie: International use only 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Richard Matthews — Tel. No. / N° de tél.: (800) 541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24 — Signature:

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 009104FM3FL

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception: Year / Année — Month / Mois — Day / Jour — Time / Heure — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provinciale

| | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage/ de risque 7 | Quantity shipped / Quantité expédiée | Units / Unités 8 | Packaging/Container No. / N° | Codes | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | ~~22410~~ 23410 | Kg | 1 | 06 | S 41 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| | Quantity received / Quantité reçue | Units / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decon Pack. / Cont. | Decon V / V |
|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | |
| (ii) | | | | | | | | |
| (iii) | | | | | | | | |
| (iv) | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 3

| | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 3051330 | 9/10 | 37 | 1000 | D05 | CH9 | A3190 | H12 | Y40 | N/A | N/A | 3825.61.00.00 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie)

Signature — Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR# 22

☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700 20

21 Date shipped / Date d'expédition: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24 — Time / Heure: ☒ A.M. ☐ P.M.: 1756

Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanche**

A52202136-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1210020730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 483-3718 | 4. Manifest Tracking Number 002104946 FLE |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Bealman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS AOC# 48606 the Primary Exporter on behalf of the Generator
CN#NF49408-2

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 02 Day 23 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): James Kinney Date leaving U.S.: 2-24-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: JAMES KINNEY 678-38813 — Signature: James Kinney — Month 02 Day 23 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H130 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nicole Ray — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (if required)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49408-2**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ~~Env~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 610) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway

City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 2: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

~~A01250-1~~ 8120-4Fusca.

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P171740 — Registration No. / N° d'immatriculation — Prov. 24: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON — Canada Border Services Agency use only

Port of exit / Point de sortie: — International use only 25

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): JAMES KINNEY — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24 — Signature: James Kinney

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 00210494GFLE

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année: — Month / Mois: — Day / Jour: — Time / Heure: — ☐ A.M. ☐ P.M. 2

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / Risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging/Container / No. / N° | Codes Int – ext | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 23340 | Kg | 1 | 06 | S 41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou kg / Unités 31 | Comments / Commentaires 32 | Handling / Code / Code de manutention 33 | Shipment / Envoi 34 — Accepted / Accepté | Refused / Refusé | Decont Pack. / Cont |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/19 | 38 | 1000 | D05 | C42 | A3150 | H12 | Y42 | N/A | N/A | 3825.61.0200 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR# — ☐ Attached / Ci-joint ☑ As follows / Ci-contre: 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 610 715-2700 20

21 Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24 — Time / Heure: 1205 ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévu — Year / Année: 09 — Month / Mois: 02 — Day / Jo: 27

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanc)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 452202186.001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104947 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. CH3486008 ERG#171 CHEST, EPA ID NO MIR000014530, IS ACTING AS THE
POC#4696/08 PRIMARY EXPORTER, ON BEHALF OF THE GENERATOR
COH NF49413-2

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship HRB
Month 02 Day 23 Year 09

**TRANSPORTER INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 3-24-09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Theo Koch
Signature:
Month 02 Day 23 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors hazardous waste for and will accept the waste the generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49413-2**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport. CR3486008 AS2202186-001 (cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL (M) MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ~~Environmental~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway | City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com | Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway | City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2 — Clean Harbors Canada Inc | Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 | City / Ville: Corunna | Province: ON | Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com | Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 | City / Ville: Corunna | Province: ON | Postal code / Code postal: NON 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23 — ~~AB120-1~~ 8180-4FUAGS

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Rechorse Drive | City / Ville: East Saint Louis | Province: IL | Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A | Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24
Trailer - Rail car No. 1 / 1re remorque - wagon: P171019 — IN.
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. (International use only) — Port of exit / Point de sortie: (International use only) 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. 26
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Ted Koch — Tel. No. / N° de tél.: 800) 541-5918

Year / Année: 09 | Month / Mois: 02 | Day / Jour: 24 | Signature: Ted Koch

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 00210494 7FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: | Province: | Postal code / Code postal:
E-mail / Courrier électronique: | Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année | Month / Mois | Day / Jour
Time / Heure — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincia

| (i) Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging/Contenant No. / N° | Codes Int – ext. 9 | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2111 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 6T 22820 | Kg | 1 | 06 | S 41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi — Accepted / Accepté 34 | Refused / Refusé | Decon Pack. / Cont. |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays — Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/10 | 39 | 1000 | D05 | C4 | AB90 | H12 | Y49 | N/A | N/A | 3925.61.00.10 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HR#
☐ Attached / Ci-joint ☒ As follows / Ci-contre : 519-864-1201
NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700 20

21 Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 24 | Time / Heure: 0800 ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée pré — Year / Année: 09 | Month / Mois: 02 | Day /

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanc**

A5220218C-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104948 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Bealman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHEST, EPA ID NO MIR 000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
ACC# 490108
CO# NF49423-1

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: HRB — Month 02 Day 23 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Steven M Wysocki Date leaving U.S.: 2-24-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven M Wysocki — Signature: Steven M Wysocki — Month 02 Day 23 Year 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brittany Orr — Signature: BO — Month 2 Day 24 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49423-1**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 AE2202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Canada) 11/17/2005

## A Generator / consignor — Producteur / expéditeur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: MYR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 5915 Dore Highway — City / Ville: Ecorse — Province: MI — Postal code / Code postal: 48229

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 5915 Dort Highway

City / Ville: Burtland — Province: MI — Postal code / Code postal: 48529

## B Carrier — Transporteur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: 0120-47UGC2

Company name / Nom de l'entreprise: Seelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5916

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1e remorque - wagon: Registration No. / N° d'immatriculation: P171839 — Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée (International use only): SARNIA, ON.

Port of exit / Point de sortie (International use only):

## C Receiver / consignee — Réceptionnaire / destinataire

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A031306

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: (X)211-174GFLF

Receiver / consignee information same as in Part A
Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Intended Receiver / consignee — Réceptionnaire / destinataire prévu: Clean Harbors Canada, Inc
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A-031306
Mailing address / Adresse postale: 4040 Telfer Road PR#3 — City / Ville: — Province: ON — Postal code / Code postal: N0M-1G0
E-mail / Courrier électronique: carlos.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021
Receiving site address / Adresse du lieu de l'expédition: 4040 Telfer Road PR#3
City / Ville: Courtright — Province: ON — Postal code / Code postal: N0M-1G0

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Steven M Wyatt — Tel. No. / N° de tél.: 800)541-5916

Year / Année: 05 — Month / Mois: 02 — Day / Jour: 24 — Signature: Steven M Wyatt

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 24
Time / Heure: 1340 ☐ A.M. ☑ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. (3) | Shipping name / Appellation réglementaire (4) | Class / Classe (5) | Sub. class(es) / Classe(s) sub. | UN No. / N° NU (6) | Packing / risk gr. / Gr. d'emballage / de risque (7) | Quantity shipped / Quantité expédiée | Units / Unités (8) | Packaging/Container No. / N° | Codes Int – ext. (9) | Phys. state / Etat phys. (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2,4-DINITROTOLUENE WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | | 2720 | kg | 1 | 05 | 2 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités (31) | Comments / Commentaires (32) | Handling Code / Code de manutention (33) | Shipment / Envoi 34 — Accepted / Accepté | Refused / Refusé | Decont. 35 — Pack. Cont. | Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

| Notice No. / N° de notification (11) | Notice Line No / N° de ligne de la notification | Shipment / Envoi (12) | Of / De | D or R code / Code D ou R (13) | C code / Code C (14) | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE (15) | H code / Code H (16) | Y code / Code Y (17) | National code in country of / Code du pays: Export / Exportation (18) | Import / Importation | Customs code(s) / Code(s) de douanes (19) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | | | | |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) (36)

Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. (37)

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Ae

Signature: BA — Tel. No. / N° de tél.: 519-864-1021

Special handling / Manutention spéciale (22): ☐ Attached /Ci-joint: ☒ As follow/ Ci-contre: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete.
Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700 (20)

21 Date shipped / Date d'expédition — Year / Année: 05 — Month / Mois: 02 — Day / Jour: 24 — Time / Heure: ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 05 — Month / Mois: 02 — Day / Jour: 24

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202106-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104939 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
ROC# 4616108
CWF NF49415-7
CHESI, EPA ID NO MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 02 Day 23 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Jerry Knapp Date leaving U.S.: 2-24-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802 — Signature: Jerry Knapp — Month 2 Day 23 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H130 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole Fox — Signature — Month 2 Day 24 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49415-7**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL (OK) MIR000014530

Company name / Nom de l'entreprise
Clean Harbors Env Services Inc

Mailing address / Adresse postale — City / Ville — Province — Postal code / Code postal
4475 Dort Highway
Burton MI 48529

E-mail / Courrier électronique — Tel. No. / N° de tél.
schriner.amanda@cleanharbors.com (810) 715-2700

Shipping site address / Adresse du lieu de l'expédition
4475 Dort Highway

City / Ville — Province — Postal code / Code postal
Burton MI 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2 — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial
Clean Harbors Canada Inc — A-031806

Mailing address / Adresse postale — City / Ville — Province — Postal code / Code postal
4090 Telfer Road RR#1
Corunna ON N0N 1G0

E-mail / Courrier électronique — Tel. No. / N° de tél.
butler.ann@cleanharbors.com (519) 864-1021

Receiving site address / Adresse du lieu de l'expédition
4090 Telfer Road RR#1

City / Ville — Province — Postal code / Code postal
Corunna ON N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

8120-4 FUQL2 (SK)

Company name / Nom de l'entreprise
Beelman Trucking Company

Mailing address / Adresse postale — City / Ville — Province — Postal code / Code postal
1 Racehorse Drive
East Saint Louis IL 62205

E-mail / Courrier électronique — Tel. No. / N° de tél.
N/A (800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24
Trailer - Rail car No. 1 / 1e remorque - wagon: P50261 — IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée (international use only): SARNIA, ON.
Port of exit / Point de sortie (international use only) 25

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Jerry KNAPP — Tel. No. / N° de tél. (800) 541-5918

Year / Année 09 — Month / Mois 02 — Day / Jour 24 — Signature: Jerry Knapp

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 2: 00210493FLE

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise
Mailing address / Adresse postale
City / Ville — Province — Postal code / Code postal
E-mail / Courrier électronique — Tel. No. / N° de tél. ( )
Receiving site address / Adresse du lieu de destination

Date received / Date de réception — Year / Année — Month / Mois — Day / Jour — Time / Heure 29 — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N°NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging/Content / No. / N° | Codes | Phys. state / État phys. 10 | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling / Code / Code de manutention 33 | Shipment / Envoi / Accepted / Accepté 34 | Refused / Refusé | Decont. / Pack. / Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 22960 | Kg | 1 | 06 | S 41 | | | | | | | | |
| (ii) | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 5133303 | 2/18 | 35 | 1000 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 35

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale 22: CLEAN HARBORS 24HR#
☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER

Signature

Tel. No. / N° de tél. 20: (810) 715-2700

Date shipped / Date d'expédition 21 — Year / Année 09 — Month / Mois 02 — Day / Jour 24 — Time / Heure ☒ A.M. ☐ P.M. 11:16

Scheduled arrival date / Date d'arrivée prévue — Year / Année 09 — Month / Mois 02 — Day / Jour 24

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 1 (white / blanche**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/26/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202660 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
**Alliant Tech Systems Inc**
**Route 114**
**Radford, VA 24141**
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
**SAME**

6. Transporter 1 Company Name
**Beelman Trucking Company**
U.S. EPA ID Number
ILR000136236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
**Clean Harbors Canada Inc**
**4090 Telfer Road RR#1**
**Corunna, ON N0N 1G0**
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

513803 Liner Exp 12-15

14. Special Handling Instructions and Additional Information
1.CH34B600B ERG#171
Burton Pretreat 513120 Line 1 expires May 06, 2009. CHESI EPA ID MIR000014530 in Burton, MI is acting as primary exporter for generator.
PO#4926108 COH-NF494744

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 03 20 09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Ray Staff Date leaving U.S.: 3/21/09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ray Staff
Signature: Ray Staff
Month Day Year: 3 20 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Mr. Hany Ole
Signature: Ole
Month Day Year: 3 21 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49474-4**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 AS2202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Gana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014536

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | P 171841 | IN |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 001202161

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination:

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

Port of entry / Point d'entrée: SARNIA, ON. — International use only

Port of exit / Point de sortie — International use only

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): RAY STAFF — Tel. No. / N° de tél.: 800)541-5918

Signature: Ray Staff — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 21

Date received / Date de réception — Year / Année — Month / Mois — Day / Jour — Time / Heure — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| (i) Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N°NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging / Contenant — No. / N° | Codes Int – ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2111 ENVIRONMENTALLY HAZARDOUS WASTE (2,6-dinitrotoluene) | N/A | N/A | NR | 25730 | Kg | 1 | 03 | 941 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Shipment / Envoi — Refused / Refusé | Decont. — Pack. / Cont. | Decont. — Ve / Véh. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/14 | 81 | WDD | D05 | C42 | A3150 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (i) | | | | | | | | | | | |
| (ii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie):

Signature — Tel. No. / N° de tél.: ( )

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER

Signature

Tel. No. / N° de tél.: 810 715-2700

Special handling / Manutention spéciale: ☐ Attached /Ci-joint: ☒ As follows/ Ci-contre: CLEAN HARBORS 24HRS 519-864-1202 NOTICE EXP DEC 15, 2009

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 21 — Time / Heure — ☐ A.M. ☐ P.M.: 1100

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 21

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaun**

A52202186-001 SC PPW 2/26/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202661 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

Burton Prenote 513303 Line 2 expires 5/6/09

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CON#NF49473-6
Burton Prenote 513303 Line 1 expires May 06, 2009. CHESI EPA ID MIR000014530 in Burton, MI is acting as primary exporter for generator.
PO#4990103

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
*I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.*

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 3 Day 19 Year 09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron MI
Transporter signature (for exports only): Date leaving U.S.: 3-21-09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Robert Sayle 717 378 8803 — Signature — Month 3 Day 21 Year 2009
Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Brittany de — Signature: Be — Month 3 Day 21 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49473-6**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CM3466008 A52202166-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Canada) 12/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Récipiendaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ernie@cleanharbors.com — Tel. No. / N° de tél.: 519 864-1021

Receiving site address / Adresse du lieu de réception: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: Port Saint Louis — Province: IL — Postal code / Code postal: 62280

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: P171008
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée (international use only): SARNIA, ON.
Port of exit / Point de sortie (international use only):

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au récipiendaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): BOB Sayre — Tel. No. / N° de tél.: 800 541-5918
Year / Année: 05 — Month / Mois: 03 — Day / Jour: 21 — Signature: Bob Sayre

Reference Nos. of other movement documents/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: MIR0301616

**C** Receiver / consignee / Récipiendaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031306

Receiver / consignee information same as in Part A / Les renseignements du récipiendaire / destinataire est le même qu'à la partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise: CLEAN HARBORS CANADA INC
Mailing address / Adresse postale: R.R. #1, 4090 TELFER ROAD
City / Ville: CORUNNA, ONTARIO — Province — Postal code / Code postal: N0N 1G0
E-mail / Courrier électronique — Tel. No. / N° de tél.: 519-864-1021
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 05 — Month / Mois: 03 — Day / Jour: 21 — Time / Heure: 09:30 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) s.à.s. | UN No. / N° NU | Packing / risk gp. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Lor / ou Kg / Unités | Packaging/Containers No. / N° | Packaging/Containers Codes / Codes emb./conten. | Phys. state / Etat phys. | Quantity received / Quantité reçue | Units / Lor / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont. Pack. Cont. | Decont. Veh. Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2118 ENVIRONMENTALLY HAZARDOUS SOLID (2,4-dichlorophenol) | 9/8 | M/A | NR | EST 21360 | Kg | 1 | 03 | 41 | 21360 | kg | Please see attached manifest weight variance explanation | 06 | Yes | | NONE | |
| (ii) | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (préciser):

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of: Export / Exportation | National code in country of: Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 1/10 | 01 | 1 of 1 | D05 | 42 | A1010 | H12 | Y42 | N/A | N/A | 3825.61.00 |
| (ii) | | | | | | | | | | | |
| (iii) | International use only | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du récipiendaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Brittany Ae
Signature: [signature] — Tel. No. / N° de tél.: 519-864-1021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☑ As follows / Ci-contre: CLEAN HARBORS 24HR 519-864-1302 NOTICE DUE DEC 15, 2005

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER
Signature: [signature] — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 05 — Month / Mois: 03 — Day / Jour: 21 — Time / Heure: 17:15 ☑ A.M. ☐ P.M.
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 05 — Month / Mois: 03 — Day / Jour: 21

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A92202186-001 SC PPW 2/26/2009 Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 001202663 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 48000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

Burton Permit Expires Dec 15 04 (PA) 5133053a Line 2

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 AOC#492108
CHB-NF494162-8
Burton Permit 5133420 Line 1 expires May 06 2009. CHESI EPA ID MIR000014530 is Burton, MI is acting as primary exporter for generator.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month/Day/Year: 03/20/09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron MI
Transporter signature (for exports only): Kurt Neterneyer Date leaving U.S.: 3-21-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Kurt A. Neterneyer | Kurt A. Neterneyer | 3 | 20 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Brittany Ale | BA | 3 | 24 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49467-8**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3686008 AS2202186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(tana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 )715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway

City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519 )864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-6FQXC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Rocahorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P171022 — Registration No. / N° d'immatriculation — Prov.: In.

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — International use only

Port of exit / Point de sortie: — International use only

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Kurt Nitschmyer — Tel. No. / N° de tél.: 800 541-5918

Year / Année: 09 — Month / Mois: 03 — Day / Jour: 21 — Signature: Kurt Nitschmyer

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031606

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 00202186SELF

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire sont la même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise: CLEAN HARBORS CANADA INC

Mailing address / Adresse postale: R.R. #1, 4090 TELFER ROAD

City / Ville: CORUNNA — Province: ONTARIO — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: — Tel. No. / N° de tél.: 519-864-1021

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 21 — Time / Heure: 1100 ☑ AM ☐ PM

If waste or recyclable material to be transferred, specify intended company name! Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire: — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) sub. | UN No. / N° ONU | Packing / Gr. d'emballage | Quantity shipped / Quantité expédiée | Units / Unité | Packaging/Container No. / N° | Packaging/Container Codes / Codes | Phys. state / État phys. | Quantity received / Quantité reçue | Units / Unité | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont. Pack. / Décont. Cont. | Decont. Veh. / Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211g ENVIRONMENTALLY HAZARDOUS WASTE (2,6-dimethylaniline) | 9/A | N/A | NR | ES: 2170 | Kg | 1 | 03 | 641 | 2154 | Kg | Please see attached for manifest weight Variance explanation | 06 | Yes | | No | No |
| (ii) | | | | | | | | | | | | | (2) | | | | |
| (iii) | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Ot / Ds | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of: Export / Exportation | National code in country of: Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 5 3543 | 2/19 | 02 | W10 | D15 | C47 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | | | | | | | | | | | | |
| (iii) | International use only | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » précisez:

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements de la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Br. Hone Ole

Signature: BO — Tel. No. / N° de tél.: 519-864-1021

Special handling / Manutention spéciale: CLEAN HARBORS 21554 — ☐ Attached /Ci-joint ☑ As follows/ Ci-contre: 519-864-1021 — BOXING DAY DEC 15, 2005

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature: — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 21 — Time / Heure: 1140 ☑ AM ☐ PM

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 21

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

A52202186-001 SC PPW 2/26/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1210020730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 483-3718 | 4. Manifest Tracking Number 001202662 FLE |
|---|---|---|---|---|

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000136236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt/Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | 513303 | | |

Burton prenote Import Line 5 expires Dec 15, 09
Burton Prenote 513120 Line 1 expires May 08, 2009.

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
CHESI EPA ID MIR000014530 in Burton, MI is acting as primary exporter for generator.

POC# 4016108 COH NI=494466-0

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 03 Day 20 Year 09

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Date leaving U.S.: 3-21-09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: LES JENNINGS 9168-38812 — Signature — Month 03 Day 20 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Brittany Oe — Signature — Month 3 Day 21 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

...the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49466-0**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CK348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

ENVIRONMENTAL

Company name / Nom de l'entreprise: Clean Harbors ENV Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: 8120-6PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | | Prov. 24 |
|---|---|---|---|
| Trailer - Rail car No. 1 / 1e remorque - wagon | P171713 | 38812 | IN |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | | |

Port of entry / Point d'entrée: SARNIA, ON — International use only — Port of exit / Point de sortie — International use only 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): LOS JONNINGS — Tel. No. / N° de tél.: 800)541-5918

Signature

Year / Année: 09 — Month / Mois: 03 — Day / Jour: 21

**C** Receiver / consignee, Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 001222102 FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception — Year / Année — Month / Mois — Day / Jour

Time / Heure — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 32

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| 3 Prov. code / Code prov. | 4 Shipping name / Appellation réglementaire | 5 Class / Classe — Sub. class(es) sub. / Classe(s) sub. | 6 UN No. / N°NU | 7 Packing / risk gr. / Gr. d'emballage / de risque | 8 Quantity shipped / Quantité expédiée | Units / Lor / ou Kg / Unités | 9 Packaging/Contenant — No. / N° | Codes Int.- ext. | 10 Phys. state / État phys. | Quantity received / Quantité reçue | Units / Lor / ou Kg / Unités | 32 Comments / Commentaires | 33 Handling Code / Code de manutention | 34 Shipment / Envoi — Accepted / Accepté | Refused / Refusé | Decon — Pack. / Cont. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 657 21,150 | Kg | 1 | 03 | S 4 1 | | | | | | | |
| (ii) | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | |

| 11 Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | 12 Shipment / Envoi | Of / De | 13 D or R code / Code É ou R | 14 C code / Code C | 15 Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | 16 H code / Code H | 17 Y code / Code Y | 18 National code in country of / Code du pays — Export / Exportation | Import / Importation | 19 Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 3/13 | 98 | (00) | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie)

Signature — Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: CLEAN HARBORS 24HRS 519-864-1201 NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700 20

21 Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 21 — Time / Heure ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévu — Year / Année: 09 — Month / Mois: 03 — Day / Jo: 21

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaur**

A52202186-001 SC PPW 2/26/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 00120264 FLE |

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51,900 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

Burton Pre note 5/15/09 Line 2 expires 5/15/09 Approved See Burton Premote 5/20/20 Line 1 expires May 06, 2009. CHES! EPA ID MIR000014580 in Burton, MI is acting as primary exporter for generator.

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171

AOC# 486108 CIO# NE494910-9

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month 03 Day 20 Year 09

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Steven M Wysocki Date leaving U.S.: 3-21-09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven M Wysocki — Signature: Steven M Wysocki — Month 03 Day 20 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| 11132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brittany Ole — Signature: BO — Month 3 Day 21 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Note: manifest form and will accept this waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49486-8**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CM346600B A52202186-001

(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: INTERNATIONAL & MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ERV Services Inc

Mailing address / Adresse postale: 4175 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 6120-4FQQC2

Company name / Nom de l'entreprise: Seelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule
Trailer - Rail car No. 1 / 1re remorque - wagon: P171839
Registration No. / N° d'immatriculation
Prov.: IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ONT. — Canada Customs use only
Port of exit / Point de sortie — International use only

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806
Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0
E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519 864-1021
Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Steven M Wysocki
Tel. No. / N° de tél.: 800 541-5918
Year / Année: 09 | Month / Mois: 03 | Day / Jour: 21
Signature: Steven M Wysocki

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 0012031818LE

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise: CLEAN HARBORS CANADA INC
Mailing address / Adresse postale: R.R. #1, 4090 TELFER ROAD
City / Ville: CORUNNA
Province: ONTARIO
Postal code / Code postal: N0N 1G0
E-mail / Courrier électronique:
Tel. No. / N° de tél.: 519-864-1021
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 | Month / Mois: 03 | Day / Jour: 21
Time / Heure: 10 10 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| (i) | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sec. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging/Containers No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T | ENVIRONMENTALLY HAZARDOUS WASTE (A,C-SOLIDIFICATION) | N/A | N/A | MR | 5351 23400 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. Cont. | Decont. Veh. |
|---|---|---|---|---|---|---|---|
| 23400 | kg | Please see attached for manifest weight variance explanation | D6 | YES | | NO | NO |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513313 | 3/6 | 84 | [illegible] | D15 | C42 | A3150 | H12 | Y12 | N/A | N/A | 3925.10 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete.*
*Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): B. Hamm
Signature: BH
Tel. No. / N° de tél.: 519-864-1021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201 BOXES EXP DEC 15, 2009

Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 03 | Day / Jour: 21
Time / Heure: ☐ A.M. ☐ P.M.
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 | Month / Mois: 03 | Day / Jour: 21

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/26/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 001202665 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

Burton pad date 5133105 Line 2 Expire Dec 15, 09

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
Burton Pad date 5133105 Line 1 expires May 09
2009. CHESI EPA ID MIR000014530 in Burton, MI is acting as primary exporter for generator.

AOC# 4916108 CN# NF494163-6

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 03 Day 20 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Mark Wiese Date leaving U.S.: 3-21-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Mark Wiese | Mark Wiese | 03 | 20 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Brittany Clay | BC | 3 | 21 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49468-6**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor — Producteur / expéditeur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: MIRD000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810 )715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A-031606
Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0
E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519 )864-1021
Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

**B** Carrier — Transporteur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: 8120-6PUQCZ

Company name / Nom de l'entreprise: Boelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1e remorque - wagon: P171841 — Prov.: In.
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. (International use only)
Port of exit / Point de sortie: (International use only)

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Mark Wiese
Tel. No. / N° de tél.: 800 )541-5918
Signature: Mark Wiese
Year / Année: 05 | Month / Mois: 03 | Day / Jour: 21

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: CH1200164SFLE

**C** Receiver / consignee — Réceptionnaire / destinataire

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial:

Receiver / consignee information same as in Part A — Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception — Year / Année | Month / Mois | Day / Jour
Time / Heure — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. — N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging / Contenant: No. / N° | Codes Int – ext | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 22,000 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Refused / Refusé | Decont: Pack. / Cont. | V |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Ot / Da | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/15 | 05 | Non | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3825.10.00.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie):
Signature:
Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: ☐ Attached /Ci-joint ☒ As follows/ Ci-contre: CLEAN HARBORS 21ERR# 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consigner certification: I certify that the information contained in Part A is correct and complete.*
*Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 05 | Month / Mois: 03 | Day / Jour: 21
Time / Heure — ☐ A.M. ☐ P.M.: 1345
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 05 | Month / Mois: 03 | Day / Jour: 21

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaun**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104742 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: ~~(419) 420-6071~~ SK 540-639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ | 001 | DT | EST 49,000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 AOC# 486/08 CN# NF49387-8
CHESI,EPA ID NO.MIR000014530,IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 02 Day: 17 Year: 09

**TRANSPORTER INT'L**

16. International Shipments: ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI.
Transporter signature (for exports only): Bryan Heck — Date leaving U.S.: 2/18/09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bryan Heck — Signature: Bryan Heck — Month: 02 Day: 17 Year: 09
Transporter 2 Printed/Typed Name — Signature — Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwcharuk — Signature: D Wiwcharuk — Month: 02 Day: 18 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49387-8**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courriel électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway

City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Récipiendaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: Ont — Postal code / Code postal: N0N 1G0

E-mail / Courriel électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519 862-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4PUQC2

Company name / Nom de l'entreprise: Emelsen Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: Port Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courriel électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P 17 1010 — Registration No. / N° d'immatriculation — Prov.: IL

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON — (Customs use only / Douanes seulement)

Port of exit / Point de sortie: — (International use only / Usage international)

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au récipiendaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Bryan Heck — Tel. No. / N° de tél.: 800 541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 18 — Signature: Bryan Heck

Reference Nos. of other movement documents/manifest(s) used / N° de référence des autres documents de mouvement/manifeste utilisés: 00114742

**C** Receiver / consignee / Récipiendaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du récipiendaire / destinataire est le même qu'à la Partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir le case ci-dessous

Company name / Nom de l'entreprise: CLEAN HARBORS CANADA INC

Mailing address / Adresse postale: R.R. #1, 4090 TELFER ROAD — City / Ville: CORUNNA, ONTARIO — Postal code / Code postal: N0N 1G0

E-mail / Courriel électronique: — Tel. No. / N° de tél.: 519 862-1021

Receiving site address / Adresse du lieu de l'expédition: same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 18 — Time / Heure: 11:05 ☒ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No. / Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging / Containers No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,6-dimethylaniline) | N/A | N/A | NR | EST 23350 | kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. Cont. | Decont. Veh. Véh. |
|---|---|---|---|---|---|---|---|
| 23450 | kg | variance explanation attached see attached manifest weight | 02 | 23450 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Gr / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 5133.3 | 2/3 | 8 | 100 | D5 | C43 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du récipiendaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wilchaluk

Signature: Darlene Wilchaluk — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ As follows / Comme suit: CLEAN HARBORS CSRS 519-862-1202 NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER

Signature: [signature] — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 18 — Time / Heure: ☐ A.M. ☒ P.M. 1730

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202196-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 00210743 FLE |

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141 SK
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers: No. | Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ | 001 | DT | EST. 49,500 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 AOC#486/08 CN# NF49406-6
CHESI, EPA ID NO.MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 17 09

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MT
Transporter signature (for exports only): Richard Mattingly
Date leaving U.S.: 2/18/09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Mattingly
Signature: Richard Mattingly
Month Day Year: 02 17 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwcharuk
Signature: D Wiwcharuk
Month Day Year: 02 18 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49406-6**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(Cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014830

ENVIRONMENTAL (H)

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courier electronique: achriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway

City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Récipiendaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courier electronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4PUQC2

Company name / Nom de l'entreprise: Boelman Trucking Company

Mailing address / Adresse postale: 1 Rockhorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courier electronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1er remorque - wagon: A71009 — Registration No. / N° d'immatriculation: 38602 — Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: BANNIER, QC — Customs use only — Port of exit / Point de sortie — International use only

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur, en vue de leur livraison au récipiendaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Richard Nothnagle — Tel. No. / N° de tél.: 800 541-5918

Year / Année: 09 — Month / Mois: 12 — Day / Jour: 18 — Signature: Richard Nothnagle

**C** Receiver / consignee / Récipiendaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 005104343 FE

Receiver / consignee information same as in Part A / Les renseignements du récipiendaire / destinataire est la même qu'à la Partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise: CLEAN HARBORS CANADA INC

Mailing address / Adresse postale: R.R. #1, 4090 TELFER ROAD

City / Ville: CORUNNA — Province: ONTARIO — Postal code / Code postal: NON 1G0

E-mail / Courier electronique: — Tel. No. / N° de tél.: 810-664-1021

Receiving site address / Adresse du lieu de l'expédition: Jane

Date received / Date de réception — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 18 — Time / Heure: 1100 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| (i) | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe / Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing group / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou kg | Packaging/Container No. / N° | Packaging/Container Code(s) / Int. ind. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2113 | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | 9 | N/A | MR | 55 / 23 1/2 | kg | 1 | 03 | S/L |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou kg | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont. Pack. Cont. | Decont. Veh. Véh. |
|---|---|---|---|---|---|---|---|
| 23320 | kg | Please see attached variance explanation for manifest weight | 06 | Yes | | Lb/b | |
| | | | (B) | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 5123455 | 1 | 8 | D15 | C45 | A3110 | H12 | Y42 | N/A | N/A | 3825.61.00.0 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du récipiendaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wuchanik

Signature: Darlene Wuchanik — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ As follow / Ci-contre: CLEAN HARBORS 24HR 519-864-1203 OFFICE HR DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER

Signature:

Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 19 — Time / Heure: 1900 ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 19

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1210020730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 483-3718 | 4. Manifest Tracking Number 002104744 FLE |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: ~~(410) 228-6071~~ BK 540-639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 AOC# 486/08 CN# NF49402-5
CHESI,EPA ID NO.MIR000014530,IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 02 Day 17 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI.
Transporter signature (for exports only): James Kinney Date leaving U.S.: 2/18/09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JAMES KINNEY — Signature: James Kinney — Month 02 Day 17 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk — Signature: Darlene Wiwcharuk — Month 02 Day 18 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49402-5**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000016530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P17174 — Registration No. / N° d'immatriculation — Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ONT. — International use only

Port of exit / Point de sortie — International use only

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): JAMES KINNEY — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 18 — Signature: James Kinney

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement documents/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 002104744 FF

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 18 — Time / Heure: 11:20 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage/ de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging/Container No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,6-dinitrotoluene) | N/A | N/A | NR | 22340 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. / Cont. | Decont. Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 9/13 | 10 | 1000 | D05 | C42 | A3170 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene W. Wichard

Signature: DWWichard — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☑ As follow/ Ci-contre: CLEAN HARBORS 21ENS — 519-864-1201 — NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete.*
*Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 18 — Time / Heure: ☐ A.M. ☐ P.M. 1935

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104745 FLE |

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: [redacted] 540-639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135290

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600E ERG#171 AOC# 486/08 CN# NF49405-8
CHESI,EPA ID NO.MIR000014530,IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 02 Day 17 Year 09

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Date leaving U.S.: 2/18/09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Fred Koch — Signature — Month 02 Day 17 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brian Orr — Signature: BO — Month 2 Day 18 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49405-8**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B AS2202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR0000014530

Company name / Nom de l'entreprise: Clean Harbors ~~Environmental~~ Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: P171019 — Prov.: IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON — (international movements only)
Port of exit / Point de sortie: (international movements only)

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Fred Koch — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 07 — Month / Mois: 02 — Day / Jour: 18 — Signature:

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire sont la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville — Province — Postal code / Code postal
E-mail / Courrier électronique — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19
Time / Heure: 11:45 ☑ AM ☐ PM

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

Reference Nos. of other movement documents/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 002104HSFLE

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging/Contenant: No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T NOT HOMOGENEOUSLY HAZARDOUS WASTE (2,4-dichlorotoluene) | N/A | N/A | NR | EST 22 Tons | Kg | 1 | 02 | S41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont.: Pack. Cont. | Decont.: Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | do | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 5133-3 | 2/18 | 9 | | D/S | C43 | A3150 | H12 | Y42 | N/A | N/A | 3825.10.00.20 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Brittany Lee

Signature: BL — Tel. No. / N° de tél.: 519)864-1021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201 CLEAN HARBORS 24HR#
NOTICK EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 15 — Time / Heure: ☑ AM ☐ PM: 11:45
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaun**

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) ~~483-3718~~ | 002104746 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
**Alliant Tech Systems Inc**
**Route 114**
**Radford, VA 24141**
Generator's Phone: ~~(419) 425-6071~~ SK 540-639-7631

Generator's Site Address (if different than mailing address)
**SAME**

6. Transporter 1 Company Name
**Beelman Trucking Company**

U.S. EPA ID Number
**ILR000135236**

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
***Clean Harbors Canada Inc***
**4090 Telfer Road RR#1**
**Corunna, ON N0N 1G0**
Facility's Phone: **(519) 864-1021**

U.S. EPA ID Number
**MIR000035204**

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. **UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ** | 001 | DT | 48000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. CH348600B ERG#171 CHESI, EPA ID NO MIR 000014530 IS ACTING ~~ON BEHALF~~ AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
~~AOC#~~ 486/08 COA NF4940-7

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month/Day/Year: 02/18/09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI.
Transporter signature (for exports only): Dennis Ebers Date leaving U.S.: 2-19-09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Dennis Ebers
Signature: Dennis Ebers
Month/Day/Year: 02/18/09

Transporter 2 Printed/Typed Name:
Signature:
Month/Day/Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month/Day/Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk
Signature: DWiwcharuk
Month/Day/Year: 02/19/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the Generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49401-7**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: A8120-4F0QC2

Company name / Nom de l'entreprise: Reelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24
Trailer - Rail car No. 1 / 1re remorque - wagon: P-7251h — IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: information/use only — Port of exit / Point de sortie: International use only 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Dennis E Reelman — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19 — Signature: Dennis E Reelman

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: 0021047461LE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19 — Time / Heure 29: 0930 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 | Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / Unités 8 | Packaging/Contenant No. / N° | Packaging/Contenant Codes / Codes | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | | N/A | NR | EST 22946 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

| | Quantity received / Quantité reçue | Units / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34: Accepted / Accepté | Refused / Refusé | Decont. 35: Pack. Cont. | Veh. Véh. |
|---|---|---|---|---|---|---|---|---|
| (i) | | Kg | | 06 | | | | |
| (ii) | | | | | | | | |
| (iii) | | | | | | | | |
| (iv) | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

| | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513313 | P/18 | 11 | 1000 | D05 | C42 | A3F10 | H12 | Y42 | N/A | N/A | 3825.61.00.10 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. — Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie) 37: Darlene Wiwcharuk — Signature: Dwiwcharuk — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale 22: ☐ Attached /Ci-joint ☐ As follows/ Ci-contre: 519-864-1201 NOTICE DUE DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets. — Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature: — Tel. No. / N° de tél. 20: 810 715-2700

Date shipped / Date d'expédition 21 — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19 — Time / Heure ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

~~A52202186-001~~ **SC PPW 2/10/2009**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) ~~483-3718~~ | 002104747 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
**Alliant Tech Systems Inc**
**Route 114**
**Radford, VA 24141**
Generator's Phone: ~~(410)420-0071~~ 540-639-7631

Generator's Site Address (if different than mailing address)
**SAME**

6. Transporter 1 Company Name: **Boelman Trucking Company** — U.S. EPA ID Number: **ILR000135236**

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
**Clean Harbors Canada Inc**
**4090 Telfer Road RR#1**
**Corunna, ON N0N 1G0**
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: **MIR000035204**

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. **UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ** | 001 | DT | 48500 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530 IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE generator
CNH NF49403-3
AOC#486108

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month/Day/Year: 02 18 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. — Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Chris Notcher — Date leaving U.S.: 2-19-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Notcher — Signature: Chris Notcher — Month/Day/Year: 2 18 09
Transporter 2 Printed/Typed Name — Signature — Month/Day/Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwcharuk — Signature: Darlene Wiwcharuk — Month/Day/Year: 2 19 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

NF49403-3

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CEM486008 AB2202186-001

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MERD00014830

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc
Mailing address / Adresse postale: 4475 Dorr Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529
E-mail / Courier electronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700
Shipping site address / Adresse du lieu de l'expédition: 4475 Dorr Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Récipiendaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806
Mailing address / Adresse postale: 4090 Halifax Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N7N 1G0 — Tel. No. / N° de tél.: 519)864-1021
E-mail / Courier electronique: butler.sue@cleanharbors.com
Receiving site address / Adresse du lieu de l'expédition: 4090 Halifax Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N7N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: AB120-690052

Company name / Nom de l'entreprise: Boulden Trucking Company
Mailing address / Adresse postale: 1 Receivers Drive — City / Ville: Fort Saint Louis — Province: IL — Postal code / Code postal: 62203 — Tel. No. / N° de tél.: 800 543-5918
E-mail / Courier electronique: N/A
Vehicle / Véhicule — Registration No. / N° d'immatriculation: P 172 425 — Prov.: IN
Trailer - Rail car No. 1 / 1er remorque - wagon
Trailer - Rail car No. 2 / 2e remorque - wagon
Port of entry / Point d'entrée: SARNIA, ON — Port of exit / Point de sortie — International use only

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au récipiendaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Chris Ritcher — Tel. No. / N° de tél.: 800 543-5918
Signature: Chris Ritcher
Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous
Company name / Nom de l'entreprise
Mailing address / Adresse postale — City / Ville — Province — Postal code / Code postal — Tel. No. / N° de tél.
E-mail / Courier electronique
Receiving site address / Adresse du lieu de réception: Same

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste: M2104747 FUE
Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés:

Date received / Date de réception: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 16 — Time / Heure: 0935 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company carrier. Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

| 9 Quantity received / Quantité reçue | 10 Units / Unités | 11 Comments / Commentaires | 12 Handling code / Code de manutention | 13 Shipment Accepted / Envoi accepté | 14 Refused / Refusé | 15 Partial / Partiel | 16 Discrepancy / Écart |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Rachael Wilcharuk — Tel. No. / N° de tél.: 5198641021
Signature: Wilcharuk

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☐ As follows / Ci-contre: CLASS 9 UN3245 PGIII
Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19
Date shipped / Date d'expédition: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19 — Time / Heure: 1700 ☐ A.M. ☐ P.M.

| 1 Notice No. / N° de notification | 2 Notice Line No. / N° de ligne de la notification | 3 Shipment / Envoi | 4 Of / De | 5 D or R code / Code É ou R | 6 C code / Code C | 7 Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | 8 H code / Code H | 9 Y code / Code Y | 10 National code in country of / Code du pays: Export / Exportation | Import / Importation | 11 Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 5133103 | 3/18 | 10 | 1000 | D05 | C40 | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

| 12 Prov. code / Code prov. | 13 Shipping name / Appellation réglementaire | 14 Class / Classe — Sub. class(es) / Classe(s) sub. | 15 UN No. / N°NU | 16 Packing / Nat. gr. / Gr. d'emballage / de risque | 17 Quantity shipped / Quantité expédiée | 18 Units - L or / ou Kg / Unités | 19 Packaging/Container No. / N° | 20 Codes | 21 Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) 2112 | ENVIRONMENTALLY HAZARDOUS WASTE N.O.S. (4-chlorobenzotrifluoride) | N/A | N/A | MB | 65/ 22210 | kg | 1 | 03 | 41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER
Signature
Tel. No. / N° de tél.: 810 715-2700

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 489-3718 | 002104748 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: ~~(410) 388-8000~~ 540-639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530 IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
AOC#4810/08. CN# NF49382-9

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANTTECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month 02 Day 18 Year 09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): X Kurt Netemeyer Date leaving U.S.: 2-19-09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kurt Netemeyer
Signature: Kurt Netemeyer
Month 2 Day 18 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwchanuk
Signature: Darlene Wiwchanuk
Month 02 Day 19 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49382-9**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3496008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4F0QC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Receiborse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5916

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: P111022 — Prov.: In.
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ONT. — International use only
Port of exit / Point de sortie — International use only

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Kuri Neren-eyer — Tel. No. / N° de tél.: 800 541-5916

Year / Année: 0 9 — Month / Mois: 0 2 — Day / Jour: 1 9 — Signature:

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 0210474BFLE

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.:
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 0 9 — Month / Mois: 0 2 — Day / Jour: 1 9 — Time / Heure: 1935 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Container No. / N° | Packaging/Container Codes / Codes | Phys. state / État phys. | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Shipment / Envoi — Refused / Refusé | Discont. — Pack. Cont. | Discont. — Veh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | 211F ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | M/A | NR | 23,490 | Kg | 1 | 03 | S | | kg | | 06 | | | | |
| (ii) | | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | | |

| | Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 9/10 | 15 | 100 | D05 | 42 | A3150 | H12 | Y42 | N/A | N/A | 3825.61.0000 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.* — Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wiwchariw — Signature: Darlene Wiwchariw — Tel. No. / N° de tél.: 5198644021

Special handling / Manutention spéciale: CLEAN HARBORS 21ERS
☐ Attached /Ci-joint ☒ As follows/ Ci-contre: 519-864-1201
NOTICE DUE DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.* — Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 0 9 — Month / Mois: 0 2 — Day / Jour: 1 9 — Time / Heure: ☒ A.M. 1150 ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 0 9 — Month / Mois: 0 2 — Day / Jour: 1 9

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

~~A52202186-001~~ ~~A52202186-001~~ SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104749 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
**Alliant Tech Systems Inc**
**Route 114**
**Radford, VA 24141**
Generator's Phone: ~~(419) 425-6071~~ 540-639-7631

Generator's Site Address (if different than mailing address)
**SAME**

6. Transporter 1 Company Name
**Beelman Trucking Company**

U.S. EPA ID Number
**ILR000135236**

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
**Clean Harbors Canada Inc**
**4090 Telfer Road RR#1**
**Corunna, ON N0N 1G0**
Facility's Phone: **(519) 864-1021**

U.S. EPA ID Number
**MIR000035204**

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. **UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ** | 001 | DT | 50,000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
CIO# NF49384-5
ADC #4616108
CHESI, EPA ID NO MIR000014530 IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: [signature] Month: 02 Day: 18 Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): [signature] Date leaving U.S.: 2/19/09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leslie Zahner Signature: [signature] Month: 02 Day: 18 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwcharuk Signature: [signature] Month: 02 Day: 19 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202185-001

(cana) 11/17/2005

**NF49384-5**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-6PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Beechcraft Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule
Trailer - Rail car No. 1 / 1e remorque - wagon: P72535
Registration No. / N° d'immatriculation
Prov.: IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. (International use only)
Port of exit / Point de sortie (International use only)

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Leslie Zalivar
Tel. No. / N° de tél.: 800)541-5918
Signature:
Year / Année: 09 Month / Mois: 02 Day / Jour: 19

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 00210474 FLE

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception: Year / Année: 09 Month / Mois: 02 Day / Jour: 19
Time / Heure: 11 45 ☐ A.M. ☐ P.M.

## 1 Intended Receiver / consignee / Réceptionnaire / destinataire prévu

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Company name / Nom de l'entreprise: Clean Harbors Canada Inc

Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| (i) | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe / Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging / Contenant No. / N° | Codes Int – ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2115 | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST 23440 | Kg | 1 | 03 | 641 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. Cont. | Decont. Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513363 | P/19 | 17 | 1001 | D05 | C43 | A3180 | H19 | Y42 | N/A | N/A | 3825.61.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene W Wcharuk
Signature: DW Wcharuk
Tel. No. / N° de tél.: 519 864 1021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☑ As follows / Ci-contre: CLEAN HARBORS 24HR 519-864-1201 HOTLINE EXP. DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition: Year / Année: 09 Month / Mois: 02 Day / Jour: 19
Time / Heure: ☑ A.M. 9:49 ☐ P.M.
Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 Month / Mois: 02 Day / Jour:

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1210020790 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 483-9718 | 4. Manifest Tracking Number 002104750 FLE |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
(419) 425-6031 & 540-639-7631
Generator's Phone:

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ | 001 | DT | 48000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530 IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
RAC #4806/08 CWF# NF49385-2

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 02 Day 18 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI.
Transporter signature (for exports only): Date leaving U.S.: 02-19-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ed Wedbalski — Signature — Month 02 Day 18 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwcharuk — Signature — Month 02 Day 19 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3466008 A52202186-001

**NF49385-2**

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIRD000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway

City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4FUQC2

Company name / Nom de l'entreprise: Bealman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: 071711 — Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée (International use only): SARNIA, ON. — Port of exit / Point de sortie (International use only):

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur, en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Ed Wiedbrauk — Tel. No. / N° de tél.: 800 541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19 — Signature: Ed Wiedbrauk

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement documents/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 002 IX4750FIE

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19 — Time / Heure: 11:40 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:

Registration No. / Provincial ID No. / N° d'immatriculation/d'id provincial:

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

| (i) Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) sub. | UN No. / N°NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Container No. / N° | Packaging/Container Codes Int. - ext. | Phys. state / Etat phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2112 ENVIRONMENTALLY HAZARDOUS WASTE (2,6-dinitrotoluene) | N/A | N/A | NR | ES 21025 | Kg | 1 | 03 | 8 41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling / Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont. Pack. / Cont. | Decont. Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/15 | 19 | 1000 | D05 | C42 | A3150 | H12 | Y42 | N/A | N/A | 3525.61.0010 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wiwcharuk

Signature: DWiwcharuk — Tel. No. / N° de tél.: 519 864 1021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: CLEAN HARBORS 24HR 519-864-1301 NOTICE DEC 13, 2005

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER

Signature:

Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19 — Time / Heure: 1905 ☒ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 19

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104753 FLE |

5. Generator's Name and Mailing Address
**Alliant Tech Systems Inc**
**Route 114**
**Radford, VA 24141**
Generator's Phone: ~~(410) 420-6071~~ SK 540-639-7631

Generator's Site Address (if different than mailing address)
**SAME**

6. Transporter 1 Company Name
**Beelman Trucking Company**
U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
**Clean Harbors Canada Inc**
**4090 Telfer Road RR#1**
**Corunna, ON N0N 1G0**
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ | 001 | DT | 49500 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
AOC# 486108
CN# NF49383-7
CHESI, EPA ID No. MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 18 09

INTL
16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Paul Dundon Date leaving U.S.: 2-19-09

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: PAUL DUNDON
Signature: Paul Dundon
Month Day Year: 2 18 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wincharuk
Signature: D Wincharuk
Month Day Year: 02 19 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49383-7**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202106-001

(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc
Mailing address / Adresse postale: 4475 Dort Highway, Burton, MI, 48529
E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810 715-2700
Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway, Burton, MI, 48529

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A8120-4PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company
Mailing address / Adresse postale: 1 Recehorse Drive, East Saint Louis, IL, 62205
E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: P502162 — IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON — International use only
Port of exit / Point de sortie — International use only

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806
Mailing address / Adresse postale: 4090 Telfer Road RR#1, Corunna, ON, N0N 1G0
E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519 864-1021
Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1, Corunna, ON, N0N 1G0

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): PAUL DUNDON
Tel. No. / N° de tél.: 800 541-5918
Year / Année: 09 | Month / Mois: 02 | Day / Jour: 19 | Signature: Paul Dundon

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 002104753FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville — Province — Postal code / Code postal:
E-mail / Courrier électronique — Tel. No. / N° de tél.:
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 19
Time / Heure: 1005 ☒ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage/de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging/Container No. / N° | Packaging/Container Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 53620 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Shipment / Envoi — Refused / Refusé | Decont. — Pack. / Cont. | Decont. — Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Ot / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 9/18 | 110 | 100 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3925.61.0000 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wiwcharuk
Signature: Dwiwcharuk
Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: CLEAN HARBORS 24HR
☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201
NOTICE DUE DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 19
Time / Heure: ☒ A.M. ☐ P.M. 1100
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 | Month / Mois: 02 | Day / Jour: 19

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-9718 | 002104751 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
**Alliant Tech Systems Inc**
**Route 114**
**Radford, VA 24141**
Generator's Phone: ~~(443) 425-0071~~ 540-639-7631

Generator's Site Address (if different than mailing address)
**SAME**

6. Transporter 1 Company Name
**Beelman Trucking Company**
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
**Clean Harbors Canada Inc**
**4090 Telfer Road RR#1**
**Corunna, ON N0N 1G0**
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ | 001 | DT | 49000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. CH348600B ERG#171 CHEST, EPA ID NO MIR000014530 IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
NOC# 486108
CN# NF49404-1

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month Day Year: 02 19 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI.
Transporter signature (for exports only): Gary Conway Date leaving U.S.: 2-19-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: GARY CONWAY
Signature: Gary Conway
Month Day Year: 02 19 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Winchcomb
Signature: Darlene Winchcomb
Month Day Year: 02 19 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

*This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.*
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CHI486008 A52202186-001

**NF49404-1**

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor — Producteur / expéditeur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 1

ENVIRONMENT CAN — MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Sax Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu 2 — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: Clean Harbors Canada Inc — A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier — Transporteur — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 23: A8120-4FUQC2

Company name / Nom de l'entreprise: Saulman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: PT 8597 — Registration No. / N° d'immatriculation — Prov.: MO

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — International use only — Port of exit / Point de sortie: — International use only 25

*Carrier Certification :* I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. *Attestation du transporteur :* J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): GARY CONWAY — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 12 — Day / Jour: 19 — Signature: Gary Conway

**C** Receiver / consignee — Réceptionnaire / destinataire — Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial 28: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: 00210475 1 FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception 29 — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 19 — Time / Heure: 0955 ☒ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging/Container No. / N° | Packaging/Container Codes Int. – ext. 9 | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2117 ENVIRONMENTALLY HAZARDOUS WASTE (2,6-dinitrotoluene) | N/A | N/A | MR | EST 23960 | kg | 1 | 03 | 41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling / Code / Code de manutention 33 | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont. 35: Pack. / Cont. | Decont. 35: Veh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation 18 | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/14 | 13 | US | D 5 | A4 | A3150 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

*Generator / consignor certification:* I certify that the information contained in Part A is correct and complete. *Attestation du producteur / expéditeur :* J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 20: 810 715-2700

*Receiver / consignee certification :* I certify that the information contained in Part C is correct and complete. / *Attestation du réceptionnaire / destinataire :* J'atteste que tous les renseignements à la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) 37: Darlene Wiechardt

Signature: Darlene Wiechardt — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale 22: ☐ Attached /Ci-joint ☒ As follows/ Ci-contre: 519-864-1201 — CLEAN HARBORS 21ERS — NOTICE EXP DEC 15, 2009

Date shipped / Date d'expédition 21 — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 19 — Time / Heure: ☐ A.M. ☒ P.M. 1725 — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 19

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

~~A52202186-001~~ ~~SC PPW 2/10/2009~~

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1210020790
2. Page 1 of: 1
3. Emergency Response Phone: ~~(800) 483-3718~~
4. Manifest Tracking Number: 002104752 FLE

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: ~~(410) 425-6074~~ 540639 7631

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: Beelman Trucking Company #800 - 38819
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III, RQ | 001 | DT | 52000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID No. MIR000014530 IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
AOC#486108 CONF#49402

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 18 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI.
Transporter signature (for exports only): Dave Myers Date leaving U.S.: 2-19-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DAVID MYERS
Signature: Dave Myers #800
Month Day Year: 2 18 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk
Signature: D Wiwcharuk
Month Day Year: 02 19 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49400-9**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor — Producteur / expéditeur (1)
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: MIR000014530
Company name / Nom de l'entreprise: Clean Harbors ENV Services Inc
Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529
E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810) 715-2700
Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

Intended Receiver / consignee — Réceptionnaire / destinataire prévu (2)
Clean Harbors Canada Inc
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A-031806
Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0
E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519) 864-1021
Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

**B** Carrier — Transporteur (23)
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: A8120-4FUQC2
Company name / Nom de l'entreprise: Beelman Trucking Company
Mailing address / Adresse postale: 1 Receiverse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205
E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800) 541-5918
Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P 171 840
Prov. (26): IN
Trailer - Rail car No. 2 / 2e remorque - wagon:
Port of entry / Point d'entrée: SARNIA, ON. — International use only
Port of exit / Point de sortie — International use only (25)
*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* (28)
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): David Myers
Tel. No. / N° de tél.: 800)541-5918
Year / Année: 09 | Month / Mois: 12 | Day / Jour: 19 | Signature: David Myers

**C** Receiver / consignee — Réceptionnaire / destinataire
Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés (27): 0021041752 FILE
Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial (28): A031806
Receiver / consignee information same as in Part A. / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous
Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same
Date received / Date de réception (29) — Year / Année: 09 | Month / Mois: 12 | Day / Jour: 19
Time / Heure: 0950 ☐ A.M. ☐ P.M.
If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire (30)
Registration No./Provincial ID No. — N° d'immatriculation/d'id provincial (31)

| Prov. code Code prov. (3) | Shipping name Appellation réglementaire (4) | Class / Classe Sub. class(es) Classe(s) sub. (5) | UN No. N° NU (6) | Packing / risk gr. / Gr. d'emballage / de risque (7) | Quantity shipped Quantité expédiée (8) | Units L or / ou Kg Unités | Packaging/Contenant No. / N° | Codes Int – ext. | Phys. state État phys. (10) |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | MR | 24580 LBS | Kg | 1 | 03 | S,L |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received Quantité reçue | Units L or / ou Kg Unités (31) | Comments Commentaires (32) | Handling Code / Code de manutention (33) | Shipment / Envoi Accepted / Accepté (34) | Shipment / Envoi Refused / Refusé (34) | Discont. Pack. Cont. (35) | Discont. Veh. Véh. (35) |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

| Notice No. N° de notification (11) | Notice Line No. N° de ligne de la notification | Shipment Envoi (12) | Of / De | D or R code Code D ou R (13) | C code Code C (14) | Basel Annex VIII or OECD Code Annexe VIII de Bâle ou Code OCDE (15) | H code Code H (16) | Y code Code Y (17) | National code in country of / Code du pays: Export Exportation | Import Importation | Customs code(s) Code(s) de douanes (19) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513363 | 2/12 | 14 | 100 | D05 | A2 | B3150 | H13 | Y42 | N/A | N/A | 3925.61.00.00 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) (36)

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.* (37)
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wiwcharuk
Signature: Dwiwcharuk
Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale (22): CLEAN HARBORS 24HRS
☐ Attached /Ci-joint ☑ As follows/ Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER
Signature
Tel. No. / N° de tél.: 810 715-2700 (20)

Date shipped / Date d'expédition (21) — Year / Année: 09 | Month / Mois: 12 | Day / Jour: 19 | Time / Heure: ☑ A.M. ☐ P.M. 1133
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 | Month / Mois: 12 | Day / Jour: 19

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104972 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON NON 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49500 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
AOC# 486/08
CWI# NF44453-B

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month Day Year: 02 26 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Richard Mottinger Date leaving U.S.: 3-6-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Mottinger
Signature: Richard Mottinger
Month Day Year: 02 26 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brittany Ore
Signature: BO
Month Day Year: 3 10 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste this generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49453-8**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B AS2202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Canada) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Environmental Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 9120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5910

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: 38802 417009 — Registration No. / N° d'immatriculation — Prov.: MI

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — Port of exit / Point de sortie — International use only

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Richard McKinney — Tel. No. / N° de tél.: 800) 541-5910

Year / Année: 05 — Month / Mois: 11 — Day / Jour: 16 — Signature:

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 0221047

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 05 — Month / Mois: 11 — Day / Jour: 16 — Time / Heure: 10:30 ☑ A.M. ☐ P.M.

*If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire* — *Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial*

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N°NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Lor / ou Kg / Unités | Packaging / Contenant — No. / N° | Codes | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2117 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 55,150 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Lor / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Refused / Refusé | Decont. — Pack. Cont. | Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

| Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 533033 | 1 | 70 | 1 | D05 | C40 | A3150 | H12 | Y42 | N/A | N/A | 3825.69.0090 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Ott

Signature: — Tel. No. / N° de tél.: 519-864-1021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☑ As follows / Ci-contre: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature: — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 05 — Month / Mois: 11 — Day / Jour: 16 — Time / Heure: 1 PM ☐ A.M. ☑ P.M.

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 05 — Month / Mois: 11 — Day / Jour: 16

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

A9220218G-001 SCRW 2/13/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104976 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7831

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CHE496102 ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AOC# 496109 AS THE PRIMARY EXPORTER ON Behalf of the Generator
CAGE NF4945O-4

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature
Month Day Year: 10 2 2 08 / 03/05/09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 3-6-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Fred Koch
Signature
Month Day Year: 3 05 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brittany Orr
Signature
Month Day Year: 3 6 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste this Generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49450-4**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

CM3466508 NF49450-4

Issued 11/17/2005

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000034536

Company name / Nom de l'entreprise: Clean Harbors Environmental Services Inc

Mailing address / Adresse postale: 6410 Telfer Highway — City / Ville: Walpole — Province: ON — Postal code / Code postal: N0A 1W0

E-mail / Courrier électronique: — Tel. No. / N° de tél.: (519) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 6410 Telfer Highway

City / Ville: Walpole — Province: ON — Postal code / Code postal: N0A 1W0

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 0120-4XXQC2

Company name / Nom de l'entreprise: Emiland Trucking Company

Mailing address / Adresse postale: 1 Escadrille Drive — City / Ville: Port Saint John — Province: QC — Postal code / Code postal: G2Z 0S5

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.

Trailer - Rail car No. 1 / 1re remorque - wagon: P171017 — Prov.: QC

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — International use only

Port of exit / Point de sortie — International use only

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): — Tel. No. / N° de tél.: 800) 541-5918

Year / Année: 06 — Month / Mois: 12 — Day / Jour: 01 — Signature:

## C Receiver / consignee / Réceptionnaire / destinataire

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 99 — Month / Mois: 03 — Day / Jour: 06

Time / Heure: 10:30 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Container — No. / N° | Codes Int – ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | [illegible] HAZARDOUS WASTE (LAB-[illegible]) | N/A | N/A | NP | 650 | KG | 1 | 33 | 9 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou kg / Unités | Comments / Commentaires | Handling / Code de manutention | Shipment / Envoi — Accepted / Accepté | Shipment / Envoi — Refused / Refusé | Discont. — Pack. Cont. | Discont. — Veh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2 | 01 | | | | | | | N/A | N/A | |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Ad

Signature: BO — Tel. No. / N° de tél.: 519-964-1021

Special handling / Manutention spéciale: ☐ Attached /Ci-joint: ☐ As follows/ Ci-contre: CLEAN HARBORS 246XX 519-864-1251 MOTOR EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): ANDREW SCHEIMER

Signature:

Tel. No. / N° de tél.: (519 715-2700

Date shipped / Date d'expédition — Year / Année: 06 — Month / Mois: 12 — Day / Jour: 01 — Time / Heure: ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue — Year / Année — Month / Mois — Day / Jour

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

AS2202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104970 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH3426000 ERG#171 CHEST, EPA ID NO. MIR000014530, IS ACTING AS THE
AOC# 486/08 PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CN# NF49451-2

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month/Day/Year: 03/05/09 JK

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): James Kinney Date leaving U.S.: 3-6-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| JAMES KINNEY 678-38813 | James Kinney | 03 | 05 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Brittany Ole | BO | 3 | 6 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49451-2**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Canada) 12/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Envr Services Inc

Mailing address / Adresse postale: 4575 Port Highway — City / Ville: Port Huron — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: corprcat.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4575 Port Highway — City / Ville: Marysville — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.anne@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: 0120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Receivers Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1re remorque - wagon: P171740 — TN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ONT. (international use only) — Port of exit / Point de sortie: (international use only) 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): JAMES KINNEY — Tel. No. / N° de tél.: 800) 541-5918

Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06 — Signature: James Kinney

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: 0000134777-MIC

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06

Time / Heure 29: 10:20 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5: Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units 8: L or / ou Kg / Unités | Packaging / Contenant 9: No. / N° | Codes | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2118 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | EST. 22,70 | Kg | 1 | 03 | S 41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34: Accepted / Accepté | Refused / Refusé | Decont. 35: Pack. / Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | KG | | 06 | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 5133 3 | 2/2 | 61 | 100 | D5 | A3150 | H12 | Y42 | CAN | USA | 3825.61.0000 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 35

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. — Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) 37: Brittany Ale

Signature: Bo — Tel. No. / N° de tél.: 519-864-1021

Special handling / Manutention spéciale 22: ☐ Attached / Ci-joint ☐ As follows / Ci-contre: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets. — Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 20: 810 715-2700

21 Date shipped / Date d'expédition — Year / Année: 05 — Month / Mois: 12 — Day / Jour: 16 — Time / Heure: ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année — Month / Mois — Day / Jour

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) AB2202196.001 SC DPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104971 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000139230

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 664-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600E ERG#171 CHEST EPA ID NO MIR000014530, IS ACTING AS THE
AOC# 486108 PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CAO# NF494520

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R.Blankenship
Month/Day/Year: 03/05/09

**TRANSPORTER INT'L**

16. International Shipments
☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): By Heck Date leaving U.S.: 3-6-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Bryan Heck | By Heck | 03 | 05 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Brittany Ole | BO | 3 | 6 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49452-0**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486005 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cons) 11/17/2005

**A Generator / consignor / Producteur / expéditeur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIK000016530

Company name / Nom de l'entreprise: Clean Harbors Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**Intended Receiver / consignee / Réceptionnaire / destinataire prévu** 2 — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Clean Harbors Canada Inc

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: MON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: MON 1G0

**B Carrier / Transporteur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: 8120-4PUQCZ

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: P 171010 — Registration No. / N° d'immatriculation — Prov. 24: IN

Trailer - Rail car No. 2 / 2e remorque - wagon

Port of entry / Point d'entrée (international use only): SARNIA, ON. — Port of exit / Point de sortie (international use only) 25

**Carrier Certification:** *I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.* / **Attestation du transporteur:** *J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): BryanHeck — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06 — Signature: BryanHeck

**C Receiver / consignee / Réceptionnaire / destinataire** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: 003104-MNFST

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06 — Time / Heure 29: 10:20 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30: — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| (i) Prov. code / Code prov 3 | Shipping name / Appellation réglementaire 4 | Class / Classe Sub. class(es) / Classe(s) sub. 5 | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg Unités 8 | Packaging / Contenant No. / N° | Packaging / Contenant Codes Ind. - ent. | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | RQIT ENVIRONMENTALLY HAZARDOUS WASTE (2,6-dinitrotoluene) | N/A | N/A | NR | 1 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou kg Unités 31 | Comments / Commentaires 32 | Handling / Code / Code de manutention 33 | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. 35 Pack. / Cont. | Decont. 35 Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | | | | |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36:

**Receiver / consignee certification:** *I certify that the information contained in Part C is correct and complete.* / **Attestation du réceptionnaire / destinataire:** *J'atteste que les renseignements de la partie C sont exacts et complets.* 37

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Ott

Signature: Brittany Ott — Tel. No. / N° de tél.: 519-864-1021

Special handling / Manutention spéciale 22: ☐ Attached / Ci-joint: ☐ As follows / Ci-contre: CLEAN HARBORS 24HRS 519-864-1201 NOTICE EXP DEC 15, 2009

**Generator / consignor certification:** *I certify that the information contained in Part A is correct and complete.* / **Attestation du producteur / expéditeur:** *J'atteste que tous les renseignements à la partie A sont exacts et complets.* 20

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

21 Date shipped / Date d'expédition: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06 — Time / Heure: ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104977 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS THE
PDC# 486108 PRIMARY EXPORTER ON BEHALF OF THE GENERATOR
CO# NF49457-9

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 03 Day 05 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI.
Transporter signature (for exports only): Les Jennings — Date leaving U.S.: 3-5-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les JENNINGS 9168-38812 — Signature — Month 03 Day 05 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwchanuk — Signature: D Wiwchanuk — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the Generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49457-9**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001

*(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR0000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-6PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: P171713 — IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — International use only
Port of exit / Point de sortie: — International use only

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Les Jansing
Tel. No. / N° de tél.: 800) 541-5918
Signature:
Year / Année: 09 Month / Mois: 03 Day / Jour: 06

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 0021049-7 FIE

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de l'expédition: Same

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806
Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0
E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519) 864-1021
Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

Date received / Date de réception — Year / Année: 09 Month / Mois: 03 Day / Jour: 06
Time / Heure: 13 10 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No. / Provincial ID No. / N° d'immatriculation/N°d provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging / Contenant No. / N° | Codes Int'l - ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2117 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dichlorotoluene) | N/A | N/A | NR | EST 23520 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont. Pack. Cont. | Decont. Veh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |
| | g | | | | | | |
| | | | | | | | |
| | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513363 P/19 | 75 | UU | D05 (4) | | A3190 | H12 | Y42 | N/A | N/A | 3905.91.00.10 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wiwcharuk
Signature: D Wiwcharuk
Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: ☐ Attached / Ci-joint: ☒ As follows / Ci-contre: CLEAN HARBORS 24HR 519-864-1201 NOTICE REF DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 Month / Mois: 03 Day / Jour: 06
Time / Heure: ☐ A.M. ☐ P.M. 1700 BK
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 Month / Mois: 03 Day / Jour: 06

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104978 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH3486008 ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AS
AOC#486/08 the Primary Exporter on behalf of the Generator
CAO# NF49454-6

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 03 Day 05 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI.
Transporter signature (for exports only): Date leaving U.S.: 3-6-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Dennis Ebers — Signature — Month 03 Day 05 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Britany Ole — Signature — Month 3 Day 6 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49454-6**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Canada) 11/17/2005

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR0000014530

Company name / Nom de l'entreprise: Clean Harbors Envr Services Inc

Mailing address / Adresse postale: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 9120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Pecahorse Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: 0.7.7510 — IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée (International use only): SARNIA, ON.
Port of exit / Point de sortie (International use only):

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1
City / Ville: Corunna
Province: ON
Postal code / Code postal: NON 1G0

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): [illegible]
Tel. No. / N° de tél.: 800) 541-5918
Signature:
Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 002104 / 10806

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville:
Province:
Postal code / Code postal:
E-mail / Courrier électronique:
Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06
Time / Heure: 11 15 01 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire:
Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| (i) Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging / Contenant No. / N° | Packaging / Contenant Codes / Int.-ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2111 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 22300 | Kg | 1 | 03 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. Cont | Decont. Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | | | | |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Ae
Signature: [signature]
Tel. No. / N° de tél.: 519-864-1001

Special handling / Manutention spéciale: CLEAN HARBORS 24HR#
☐ Attached / Ci-joint: ☒ As follows / Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature:
Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06
Time / Heure: ☐ A.M. ☐ P.M.
Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 03 — Day / Jour: 10

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 452202186.001 SC PRW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104979 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 48000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CHS48600B ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AS
POC# 4616108 THE PRIMARY EXPORTER ON BEHALF OF THE Generator
C/O# NF49455-3

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 03 Day 05 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 3-6-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Pitcher — Signature — Month 3 Day 5 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Brittany Ott — Signature: BO — Month 3 Day 6 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49455-3**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH2486005 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cane) 11/17/2005

**A Generator / consignor / Producteur / expéditeur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIR0000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: (810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B Carrier / Transporteur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: 8120-6PUCC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Receiverse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1re remorque - wagon: P172425 — Prov.: IL

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée (international use only): SARNIA, ON. — Port of exit / Point de sortie (international use only) 25

**C Receiver / consignee / Réceptionnaire / destinataire** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 26: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: (X2) 1124-TIME

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville — Province — Postal code / Code postal:
E-mail / Courrier électronique — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2 — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road Unit #1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: kurler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road Unit #1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Chris Ditch — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 03 — Day / Jour: 16 — Signature: Chris Ditch

Date received / Date de réception: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 16 — Time / Heure 29: 11:50 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30: Same — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial 31:

| | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / nat gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / Lor / ou Kg Unités 8 | Packaging / Contenant No. / N° | Codes Int – ext. 9 | Phys. state / État phys. 10 | Quantity received / Quantité reçue | Units / Lor / ou kg Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi Accepted / Accepté | Refused / Refusé | Decont. 35 Pack. Cont. | Veh. Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dimethylphenol) | N/A | N/A | NR | <ST 21430 | Kg | 1 | 03 | 41 | | kg | | 06 | | | | |
| (ii) | | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | | |

| | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment Envoi 12 | Or / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays: Export / Exportation 18 | Import / Importation | Customs code(s) / Code(s) de douane 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513353 | 1 | 13 | | D15 | 100 | A3150 | H12 | Y9 | N/A | N/A | 3825.61.0000 |
| (ii) | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 35

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) 37: Brittany Orr

Signature: BO — Tel. No. / N° de tél.: 519-864-1021

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 20: 810 715-2700

Special handling / Manutention spéciale 22: ☐ Attached / Ci-joint: ☒ As follows / Ci-contre: CLEAN HARBORS 24HRS 519-864-1201 NOTICE EXP DEC 15, 2009

Date shipped / Date d'expédition 21: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 16 — Time / Heure: ☑ A.M. 11:50 ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 16

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

A522021860001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1210020730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 002104980 FLE

**GENERATOR**

5. Generator's Name and Mailing Address:
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: Beelman Trucking Company #800-38819
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CHS48600B ERG#171 CHESI, EPA ID No. MIR000014530, IS ACTING AOC# 496/08 CO# NF494561 AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
*I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.*

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month/Day/Year: 03/05/09

**TRANSPORTER INT'L**

16. International Shipments
Transporter signature (for exports only): David Myers
☐ Import to U.S. ☒ Export from U.S.
Port of entry/exit: Port Huron, MI
Date leaving U.S.: 3-6-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DAVID MYERS
Signature: David Myers
Month/Day/Year: 03/05/09

Transporter 2 Printed/Typed Name:
Signature:
Month/Day/Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month/Day/Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brittany Ole
Signature: BO
Month/Day/Year: 3/6/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste this generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49456-1**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001 (cana) 11/17/2005

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MTN000010530

Company name / Nom de l'entreprise: Clean Harbors Environmental Services Inc

| Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal |
|---|---|---|---|
| 4975 Dort Highway | Burlington | ON | L7L 5J8 |

E-mail / Courriel électronique: ontario.emergencies@cleanharbors.com — Tel. No. / N° de tél.: (519) 336-2700

Shipping site address / Adresse du lieu de l'expédition: 4975 Dort Highway

| City / Ville | Province | Postal code / Code postal |
|---|---|---|
| Burlington | ON | L7L 5J8 |

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031006

| Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal |
|---|---|---|---|
| 4090 Telfer Road RR#1 | Corunna | ON | N0N 1G0 |

E-mail / Courriel électronique: outlet.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

| City / Ville | Province | Postal code / Code postal |
|---|---|---|
| Corunna | ON | N0N 1G0 |

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: 8120-9PUCC2

Company name / Nom de l'entreprise: Beelman Trucking Company

| Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal |
|---|---|---|---|
| 1 Receborse Drive | East Saint Louis | IL | 62205 |

E-mail / Courriel électronique: N/A — Tel. No. / N° de tél.: 800 541-5916

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1e remorque - wagon | [illegible] | [illegible] |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON — International use only — Port of exit / Point de sortie: International use only 25

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): [illegible] — Tel. No. / N° de tél.: 800)541-5916

Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06 — Signature: [signature]

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28: A031006

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: [illegible]

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

| Company name / Nom de l'entreprise | | | |
|---|---|---|---|
| Mailing address / Adresse postale | | | |
| City / Ville | | Province | Postal code / Code postal |
| E-mail / Courriel électronique | | Tel. No. / N° de tél. | ( ) |
| Receiving site address / Adresse du lieu de destination: Same | | | |

Date received / Date de réception: Year / Année: 09 — Month / Mois: 03 — Day / Jour: 06 — Time / Heure 29: 12:30 ☐ A.M. ☑ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30: — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial 31:

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging / Contenant 9 No. / N° | Codes Int – ext. | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2317 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A. | N/A. | NR | 23.5 | Kg | 1 | 03 | B41 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / L or / ou kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 Accepted / Accepté | Refused / Refusé | Decont. 35 Pack. / Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | Kg | | 06 | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets. 37

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Ole

Signature: [signature] — Tel. No. / N° de tél.: 519-864-1021

Special handling / Manutention spéciale 22: ☐ Attached /Ci-joint ☐ As follows/ Ci-contre: CLEAN HARBORS 24HRS 519-864-1201 NOTICE EXP DEC 15, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets. 20

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): MARIA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition 21: Year / Année: 06 — Month / Mois: 03 — Day / Jour: 06 — Time / Heure: ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue: Year / Année: 06 — Month / Mois: 03 — Day / Jour: 06

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186.001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104961 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. CH348600B ERG#171 CHESI, EPA ID No. MIR000014530, IS ACTING AS THE Primary Exporter on behalf of the Generator
AOC# 4626109
CON# NF49492-C

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month/Day/Year: 02/25/09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Fort Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 2-26-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Clayton Stephenson
Signature:
Month/Day/Year: 02/25/09

Transporter 2 Printed/Typed Name:
Signature:
Month/Day/Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwcharuk
Signature:
Month/Day/Year: 2-26-09

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49492-6**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

v(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors ERF Services Inc

Mailing address / Adresse postale: 6475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 6475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: cutler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4FUOC2

Company name / Nom de l'entreprise: Seelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800-541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: 92536 — Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — International use only

Port of exit / Point de sortie — International use only

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur: J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Cindy Stephens — Tel. No. / N° de tél.: 800 541-5918

Year / Année: 09 — Month / Mois: 12 — Day / Jour: 26 — Signature:

Reference Nos. of other movement documents/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 102104761 CF

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A — ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise: CLEAN HARBORS CANADA INC

Mailing address / Adresse postale: R.R. #1, 4090 TELFER ROAD — City / Ville: CORUNNA, ONTARIO — Province: — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: — Tel. No. / N° de tél.: 519-864-1021

Receiving site address / Adresse du lieu de destination: Land

Date received / Date de réception — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 26 — Time / Heure: 1145 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) s.-s. | UN No. / N° NU | Packing / Pack. gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Unités | Packaging / Contenant: No. / N° | Packaging / Contenant: Code | Phys. state / État phys. | Quantity received / Quantité reçue | Units / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont. Pack. Cont. | Decont. Va |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | ZIIT | ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dichlorophenol) | N/A | N/A | NR | 22540 | Kg | 1 | 06 | SL | 22340 | kg | Variance explanation. Please see attached manifest weight. | 06 | Yes | | | |
| (ii) | | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | CH | | | | | | |

| | Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Ot / De | D or R code / Code É ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | [illegible] | 01 | 55 | [illegible] | 15 | (4) | A3150 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements de la partie C sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wilcharuk

Signature: Darlene Wilcharuk — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: CLEAN HARBORS 24HR — ☐ Attached / Ci-joint ☐ As follows / Ci-contre: 519-864-1201 NOTICE EXP DEC 13, 2009

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 26 — Time / Heure: ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 30

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

45220216-001 SC PFW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-5715 | 002104962 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company
U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH3486008 ERG#171 CHESI, EPA ID No. MIR 000014530, IS ACTING AS
RQC# 496/08 the Primary Exporter on behalf of the Generator
CW# NF4949-B

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 25 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S.
Transporter signature (for exports only): Jerry Knapp
Port of entry/exit: Port Huron MI
Date leaving U.S.: 2-26-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802
Signature: Jerry Knapp
Month Day Year: 2 25 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brittany OLR
Signature: BO
Month Day Year: 2 26 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49491-8**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202106-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Canada) 11/17/2005

**A Generator / consignor / Producteur / expéditeur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000024530

Company name / Nom de l'entreprise: Clean Harbors Environmental Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B Carrier / Transporteur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 9120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Beelman Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.:
Trailer - Rail car No. 1 / 1re remorque - wagon: P50261 — ON
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: BARN,CA, ON (International use only) — Port of exit / Point de sortie (International use only)

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Jerry KNAPP — Tel. No. / N° de tél.: 800 )541-5918

Year / Année: 09 — Month / Mois: 12 — Day / Jour: 16 — Signature: Jerry Knapp

**C Receiver / consignee / Réceptionnaire / destinataire** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial:

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Date received / Date de réception: Year / Année — Month / Mois — Day / Jour — Time / Heure: ☐ A.M. ☐ P.M.

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0M 1G0

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N°NU | Packing / risk gr. / Gr. d'emballage/ de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Contenant — No. / N° | Codes | Phys. state / État phys. | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Refused / Refusé | Decont. — Pack. Cont. | Veh. Veh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | ON | 2319 ENVIRONMENTALLY HAZARDOUS WASTE LQ, 4-dinitrotoluene; | N/A | N/A | NR | 33350 | Kg | 1 | 06 | S | | | | | | | | |
| (ii) | | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | | |

| | Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment Envo | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | | | | | |
| (ii) | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie):

Signature — Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: ☐ Attached /Ci-joint ☒ As follows/ Ci-contre: CLEAN HARBORS 24HR 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition: Year / Année: 09 — Month / Mois: 12 — Day / Jour: 16 — Time / Heure: ☐ A.M. ☐ P.M.

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A522021660.001 SC PFW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104963 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51500 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
CO#NF49490-0
Doc# 48616B
CHESI, EPA ID NO. MIR000014530, IS ACTING AS the Primary Exporter on behalf of the Generator

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month/Day/Year: 02/25/09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Ray Stoff — Date leaving U.S.: 2.26.09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ray Stoff — Signature: Ray Stoff — Month/Day/Year: 02/25/09
Transporter 2 Printed/Typed Name — Signature — Month/Day/Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Brittany Oke — Signature: BO — Month/Day/Year: 2/26/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49490-0**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B AS2202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Cons) 11/17/2005

## A Generator / consignor / Producteur / expéditeur

1 Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000020530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 1475 Dort Highway — City / Ville: Flint — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: erginer.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 1475 Dort Highway

City / Ville: Flint — Province: MI — Postal code / Code postal: 48529

2 Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#3 — City / Ville: Corunna — Province: Ont — Postal code / Code postal: NON 1G0

E-mail / Courrier électronique: Butler.anne@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#3

City / Ville: Corunna — Province: ON — Postal code / Code postal: NON 1G0

## B Carrier / Transporteur

23 Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-6FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | 217: 2941 | ON |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON — (Internal use only)
Port of exit / Point de sortie — (International use only) — 25

26 Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Ray Starr — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 16 — Signature: Ray Starr

## C Receiver / consignee / Réceptionnaire / destinataire

27 Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 0210-4763-15

28 Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception: Year / Année: 09 — Month / Mois: 02 — Day / Jour: 16
29 Time / Heure: 1311 ☐ A.M. ☐ P.M.

30 If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| 3 Prov. code / Code prov. | 4 Shipping name / Appellation réglementaire | 5 Class / Classe Sub. class(es) / Classe(s) sub. | 6 UN No. / N° NU | 7 Packing / risk gr. / Gr. d'emballage / de risque | 8 Quantity shipped / Quantité expédiée | 8 Units / L or / ou Kg / Unités | 9 Packaging/Contenant No. / N° | 9 Codes Int – ext. | 10 Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 2315 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NR | 24510 | KG | 1 | DE | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| 31 Quantity received / Quantité reçue | 31 Units / L or / ou kg / Unités | 32 Comments / Commentaires | 33 Handling Code / Code de manutention | 34 Shipment / Envoi Accepted / Accepté | 34 Refused / Refusé | 35 Decont. Pack. Cont. | 35 Veh. Véh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

| 11 Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | 12 Shipment / Envoi | Of / De | 13 D or R code / Code É ou R | 14 C code / Code C | 15 Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | 16 H code / Code H | 17 Y code / Code Y | 18 National code in country of / Code du pays: Export / Exportation | Import / Importation | 19 Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | | | | | | | | | | |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

international use only

36 If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

37 Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Brittany Orr
Signature: BO — Tel. No. / N° de tél.: 519-864-102

22 Special handling / Manutention spéciale: CLEAN HARBORS 24HR#
☐ Attached / Ci-joint: ☐ As follows / Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

21 Date shipped / Date d'expédition: Year / Année: 05 — Month / Mois: 12 — Day / Jour: 16 — Time / Heure: ☐ A.M. ☐ P.M. 1130
Scheduled arrival date / Date d'arrivée prévue: Year / Année: 05 — Month / Mois: 12 — Day / Jour: 20

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete.*
*Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — 20 Tel. No. / N° de tél.: 810 715-2700

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 452202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104964 FLE |

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Beelman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021
U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51500 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO. MIR 000014530, IS ACTING AS
ACC# 486103 THE PRIMARY EXPORTER ON BEHALF OF THE Generator
CO# NF49488-4

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month/Day/Year: 02/25/09

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Steve Meyers Date leaving U.S.: 02.26.09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven Meyers — Signature: Steven Meyers — Month/Day/Year: 02/25/09

Transporter 2 Printed/Typed Name — Signature — Month/Day/Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wuchanik — Signature: Darlene Wuchanik — Month/Day/Year: 02/27/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49488-4**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport

CM3466008 A522U2186-001

(cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIR0000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810)715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: Ont — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: Ont — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: 8126-4PUQC2

Company name / Nom de l'entreprise: Seelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800)541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24
Trailer - Rail car No. 1 / 1re remorque - wagon: P171839 — Prov.: IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: SARNIA, ON. — International use only — Port of exit / Point de sortie: — International use only 25

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.* 26
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Steven M Wysocki — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 26 — Signature: Steven M Wysocki

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.:
Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27 — Time / Heure 29: 0735 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| (i) | Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N°NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units / Lor / ou Kg / Unités 8 | Packaging / No. / N° | Container / Codes | Phys. state / Etat phys. 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | 2112 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dichlorotoluene) | N/A | N/A | NR | 33-110 LST | Kg | 1 | 06 | S |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Lor / ou kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi - Accepted / Accepté 34 | Shipment / Envoi - Refused / Refusé | Decont. - Pack. / Cont. | Decont. - Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |

| (i) | Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code É ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513305 | 2/15 | 51 | 12 | D15 | C42 | B3110 | H12 | Y42 | N/A | N/A | 3005.10.10 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 35

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie) 9: Darlene Wiwcharuk

Signature: Darlene Wiwcharuk — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale 22: CLEAN HARBORS 24HR
☐ Attached / Ci-joint ☐ As follows / Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 20: 810 715-2700

Date shipped / Date d'expédition 21 — Year / Année: 01 — Month / Mois: 02 — Day / Jour: 26 — Time / Heure: ☐ A.M. ☐ PM: 1413

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104965 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. CH348600B ERG#171 CHEST, EPA ID NO. MIR 000014530 IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE Generator
POC# 466108
WO# NF49487-6

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month 02 Day 26 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: PORT HURON, MI
Transporter signature (for exports only): Gary Conway Date leaving U.S.: 2-27-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Gary Conway
Signature: Gary Conway
Month 02 Day 26 Year 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwcharuk
Signature: D Wiwcharuk
Month 02 Day 27 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the Generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49487-6**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B AS2202186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

ENVIRONMENTAL MIR0000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2 — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Clean Harbors Canada Inc

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

8120-4PBQC2

Company name / Nom de l'entreprise: Seelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov. 24

Trailer - Rail car No. 1 / 1e remorque - wagon:

Trailer - Rail car No. 2 / 2e remorque - wagon: PT8597 — MP

Port of entry / Point d'entrée: SARNIA, ONT. — International use only

Port of exit / Point de sortie — International use only 25

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): SARI CONWAY — Tel. No. / N° de tél.: 800)541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27 — Signature: [signature]

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: 02104165 FLE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A

☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville — Province — Postal code / Code postal:

E-mail / Courrier électronique — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27

Time / Heure 29: 0935 ☒ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial 31

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. 7 — Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités 8 | Packaging/Container 9 — No. / N° | Codes Int'l - ext. | Phys. state / État phys. 10 | Quantity received / Quantité reçue 31 | Units / L or / ou kg / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 — Accepted / Accepté | Refused / Refusé | Decont. 35 — Pack. Cont. | Veh. Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2112 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dichlorotoluene) | N/A | N/A | NR | 2250 | Kg | 1 | 06 | S | | kg | | 06 | | | | |
| (ii) | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 3/19 | 60 | 1200 | D05 | C47 | AB190 | H12 | Y42 | N/A | N/A | 3825610010 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) 37: Darlene W. Wcharuk

Signature: DWWcharuk — Tel. No. / N° de tél.: 519 8641021

Special handling / Manutention spéciale 22: ☐ Attached /Ci-joint: ☒ As follows/ Ci-contre: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél. 20: 810 715-2700

Date shipped / Date d'expédition 21 — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27 — Time / Heure: ☒ A.M. ☐ P.M. 1130

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104966 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: Boolman Trucking Company — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number: MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

PO# 4816108 NF4PM94-2

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE GENERATOR

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month/Day/Year: 02/26/09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Chris Ditcher Date leaving U.S.: 2-27-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Ditcher — Signature: Chris Ditcher — Month/Day/Year: 2/26/09
Transporter 2 Printed/Typed Name — Signature — Month/Day/Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wiwchanuk — Signature: D Wiwchanuk — Month/Day/Year: 02/27/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49494-2**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH1486008 A52202186-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(Gana) 11/17/2005

**A Generator / consignor / Producteur / expéditeur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIRD000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B Carrier / Transporteur** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-6PUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Racehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 541-5918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon: Registration No. / N° d'immatriculation: P172425 — Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon:

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 002104966FLE

**C Receiver / consignee / Réceptionnaire / destinataire** — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est le même qu'à la Partie A: ☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.:

Receiving site address / Adresse du lieu de destination: Same

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

Port of entry / Point d'entrée: SARNIA, ON. — International use only

Port of exit / Point de sortie — International use only

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Chris Nitcher — Tel. No. / N° de tél.: 800 541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27 — Signature: Chris Nitcher

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27 — Time / Heure: 1401 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe Sub. classe(s) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Container No. / N° | Packaging/Container Codes / Int. - ext. | Phys. state / État phys. |
|---|---|---|---|---|---|---|---|---|---|---|
| (i) | | 211T ENVIRONMENTALLY HAZARDOUS WASTE (2,4-diaminotoluene) | N/A | N/A | MR | EST 22150 | Kg | 1 | 06 | S 41 |
| (ii) | | | | | | | | | | |
| (iii) | | | | | | | | | | |
| (iv) | | | | | | | | | | |

| | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi Accepted / Accepté | Shipment / Envoi Refused / Refusé | Decont. Pack. / Cont. | Decont. Veh. / Véh. |
|---|---|---|---|---|---|---|---|---|
| (i) | | kg | | 06 | | | | |
| (ii) | | | | | | | | |
| (iii) | | | | | | | | |
| (iv) | | | | | | | | |

| | Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513303 | 2/10 | 63 | 120 | D5 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3925.61.00.10 |
| (ii) | International use only | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene W. Wincharuk

Signature: Darlene W. Wincharuk — Tel. No. / N° de tél.: 519 864-1021

Special handling / Manutention spéciale: CLEAN HARBORS 24HRS

☐ Attached / Ci-joint ☒ As follows / Ci-contre: 519-864-1201

NOTICE EXP DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature: — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27 — Time / Heure: ☐ A.M. ☒ P.M. 1900

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104967 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135230

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B
AUC# 486/08
CN# NF49488-2
ERG#171 CHESI, EPA ID NO. MIR000014530, IS ACTING AS THE PRIMARY EXPORTER ON BEHALF OF THE generator

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month Day Year: 02 26 09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Dennis Ebers
Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Dennis Ebers
Signature: Dennis Ebers
Month Day Year: 02 26 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)

Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk
Signature: Darlene Wiwcharuk
Month Day Year: 02 27 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49489-2**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/maniteste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH346600R AA220216G-001

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1: MIR000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 2: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23: 6120-4FUQC2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Rocehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62209

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1e remorque - wagon | F 73516 | IN. |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée: SARNIA, ON. — International use only — Port of exit / Point de sortie: International use only 25

Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets. 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Dennis Ehers — Tel. No. / N° de tél.: 800) 541-5918

Signature: Dennis Ehers — Year / Année: 09 — Month / Mois: 12 — Day / Jour: 17

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 3: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifeste utilisés 27: 002104-1BILLF

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville: — Province: — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception 29: Year / Année: 09 — Month / Mois: 12 — Day / Jour: 22 — Time / Heure: 11:45 ☐ A.M. ☐ P.M.

If wastes or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial 31

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 — Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. 7 — Gr. d'emballage/ de risque | Quantity shipped / Quantité expédiée | Units 8 — L or / ou Kg / Unités | Packaging/Contenant 9 — No. / N° | Codes | Phys. state / Etat phys. 10 | Quantity received / Quantité reçue | Units 21 — L or / ou Kg / Unités | Comments / Commentaires 32 | Handling 33 — Code / Code de manutention | Shipment / Envoi 34 — Accepted / Accepté | Refused / Refusé | Decont. 35 — Pack. / Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2112 ENVIRONMENTALLY HAZARDOUS SOLID (2,4-dinitrotoluene) | N/A | M/A | MR | EST 2240 | Kg | 1 | 06 | S | | kg | | 06 | | | | |
| (ii) | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 35

| Notice No. / N° de notification 11 | Notice Line No / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 2/12 | 02 | CAN | D05 | (4) | A3190 | H12 | Y42 | N/A | N/A | 3825.61.00.00 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets. 32

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Darlene Wilcharuk

Signature: DWilcharuk — Tel. No. / N° de tél.: 519 864 1021

Special handling / Manutention spéciale 22: ☐ Attached / Ci-joint: ☒ As follows / Ci-contre: CLEAN HARBORS 24HRS 519-864-1201 NOTICE EXP DEC 15, 2006

Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets. 20

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER

Signature: [signature] — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition 21: Year / Année: 09 — Month / Mois: 12 — Day / Jour: 22 — Time / Heure: ☐ A.M. ☒ P.M. 03:40 — Scheduled arrival date / Date d'arrivée prévue: Year / Année: 09 — Month / Mois: 12 — Day / Jour: 27

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

A52202186-001 SC PPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1210020790 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 483-3718 | 4. Manifest Tracking Number 002104968 FLE |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company #800-38819

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171
ACC# 422108
CCN# NF49497-5
CHESI, EPA ID NO. MIR 000014530, IS ACTING AS THE Primary Exporter on behalf of the Generator

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month 02 Day 26 Year 09

**TRANSPORTER INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S.
Transporter signature (for exports only): Dave Myers
Port of entry/exit: Port Huron, MI
Date leaving U.S.: 2.27.09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DAVID MYERS
Signature: David Myers
Month 2 Day 26 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Darlene Wiwcharuk
Signature: DWiwcharuk
Month 02 Day 27 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

**Clean Harbors has the appropriate permits for and will accept the waste the Generator is shipping.**

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49497-5**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CEI496008 AS2202186-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR0000014530

ENVIRONMENTAL CA

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810 )715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway

City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4700C2

Company name / Nom de l'entreprise: Seelman Trucking Company

Mailing address / Adresse postale: 1 Recehorse Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62203

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800 )541-8918

Vehicle / Véhicule — Trailer - Rail car No. 1 / 1re remorque - wagon — Registration No. / N° d'immatriculation: P171840 — Prov.: IN

Trailer - Rail car No. 2 / 2e remorque - wagon

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifeste utilisés: 09210-49495-LE

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.:
Receiving site address / Adresse du lieu de destination: Same

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519 )864-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1

City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

Port of entry / Point d'entrée (carrier use only): WINDSOR, ON. — Port of exit / Point de sortie (international use only):

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur, en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): David Myers — Tel. No. / N° de tél.: 800 )541-8918

Year / Année: 07 — Month / Mois: 02 — Day / Jour: 27 — Signature: David Myers

Date received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27

Time / Heure: 0940 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire. — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe - Sub. class(es) / Classe(s) sub. | UN No. - N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / Lor / ou Kg Unités | Packaging/Contenant No. / N° | Packaging/Contenant Codes / Int. - ext. | Phys. state / État phys. | Quantity received / Quantité reçue | Units / Lor / ou Kg Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi - Accepted / Accepté | Shipment / Envoi - Refused / Refusé | Decont. Pack. Cont. | Decont. Veh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2113 ENVIRONMENTALLY HAZARDOUS WASTE (2,6-dimethoxyaniline) | N/A | N/A | MR | 33930 | Kg | 1 | 06 | S | | kg | | 06 | | | | |
| (ii) | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment / Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code (i) country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) 513303 | 9/12 | 01 | 20 | D05 | C42 | A3190 | H12 | Y42 | N/A | N/A | 3926.10.10.10 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wiechanik

Signature: DWWichanik — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: CLEAN HARBORS ENVIR — ☐ Attached / Ci-joint : ☑ As follows / Ci-contre : 519-864-1201 — EXPIRES END DEC 15, 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER

Signature: — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27

Time / Heure: ☑ A.M. 1150 ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) A52202186-001 SC PPW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104969 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000135236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49500 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CH348600B ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING AS
CO# NF49481-9 THE PRIMARY EXPORTER ON Behalf of the Generator
PROC# 4/6/09

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTESM INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month 02 Day 26 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Paul Dunbar Date leaving U.S.: 2-27-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: PAUL DUNBAR
Signature: Paul Dunbar
Month 2 Day 26 Year 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Darlene Wuchanik
Signature: Darlene Wuchanik
Month 02 Day 27 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

NF49481-9

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CHI466002 ARX202105-001

Movement Document / Manifest Reference No. / N° de référence du document de mouvement/manifeste

(cana) 11/17/2005

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR0000014530

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com — Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway — City / Ville: Burton — Province: MI — Postal code / Code postal: 48529

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4F0022

Company name / Nom de l'entreprise: Seelman Trucking Company

Mailing address / Adresse postale: 1 Receptions Drive — City / Ville: East Saint Louis — Province: IL — Postal code / Code postal: 62203

E-mail / Courrier électronique: N/A — Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon: 150262 — IN
Trailer - Rail car No. 2 / 2e remorque - wagon:

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: 0021049845-E

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville: — Province: — Postal code / Code postal:
E-mail / Courrier électronique: — Tel. No. / N° de tél.:
Receiving site address / Adresse du lieu de destination: Same

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031806

Mailing address / Adresse postale: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: butler.ann@cleanharbors.com — Tel. No. / N° de tél.: 519) 862-1021

Receiving site address / Adresse du lieu de l'expédition: 4090 Telfer Road RR#1 — City / Ville: Corunna — Province: ON — Postal code / Code postal: N0N 1G0

Port of entry / Point d'entrée (international use only): WINDSOR ONT — Port of exit / Point de sortie (international use only):

*Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. / Attestation du transporteur: J'atteste avoir reçu les déchet(s) ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): PAUL DUNDON — Tel. No. / N° de tél.: 800) 541-5918

Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27 — Signature: Paul Dundon

Data received / Date de réception — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27 — Time / Heure: 1200 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du/destinataire — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial:

| Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe: Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / Risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Containers: No. / N° | Codes – Int'l – est. | Phys. state / Etat phys. | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi: Accepted / Accepté | Shipment / Envoi: Refused / Refusé | Decont. Pack. Cont. | Decont. Veh. Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 2111 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dichlorobenzene) | N/A | N/A | NR | 23100 | Kg | 1 | 06 | S | | Kg | | 06 | | | | |
| (ii) | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | |

| Notice No. / N° de notification | Notice Line No. / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays: Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 513343 | 2/2 | 64 | 120 | US | CA2 | 031 | 112 | 112 | N/A | N/A | 3925.10.0000 |
| (ii) | International use only | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Darlene Wilkoharuk

Signature: Wilkoharuk — Tel. No. / N° de tél.: 5198641021

Special handling / Manutention spéciale: CLEAN HARBORS 24HR

☐ Attached / Ci-joint ☐ As follows / Ci-contre: 519-862-1200

DOCK: 519-862-1215 2009

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): AMANDA SCHRINER — Signature — Tel. No. / N° de tél.: 810 715-2700

Date shipped / Date d'expédition — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27 — Time / Heure: 1958 ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année: 09 — Month / Mois: 02 — Day / Jour: 27

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 3 (yellow / jaune)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210620730 | 1 | (800) 483-5710 | 002104973 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Reliable Trucking Company

U.S. EPA ID Number
ILD099195236

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035264

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 50000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CHG48900P... ERG#171 CHESI, EPA ID NO MIR000014530, IS ACTING
POCH 48 6/08 AS THE PRIMARY EXPORTER ON BEHALF OF THE Generator
UON NF-19482-7

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month Day Year: 02 27 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 2-28-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Leo Koch
Signature:
Month Day Year: 02 27 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brittany Orr
Signature: BO
Month Day Year: 02 28 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

Clean Harbors has the appropriate permits for and will accept the waste the Generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49482-7**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH3486008 A52202186-001
CH3486008 A52202186-001

(page) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

**A** Generator / consignor / Producteur / expéditeur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

MIR000014539

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4475 Dort Highway | City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

E-mail / Courrier électronique: schriner.amanda@cleanharbors.com | Tel. No. / N° de tél.: 810) 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4475 Dort Highway | City / Ville: Burton | Province: MI | Postal code / Code postal: 48529

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2 | Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: Clean Harbors Canada Inc | A-031805

Mailing address / Adresse postale: 5990 Tailer Road RR#3 | City / Ville: Corunna | Province: ON | Postal code / Code postal: N0N 1G0

E-mail / Courrier électronique: tailer.road@cleanharbors.com | Tel. No. / N° de tél.: 519)864-1021

Receiving site address / Adresse du lieu de l'expédition: 5990 Tailer Road RR#3 | City / Ville: Corunna | Province: ON | Postal code / Code postal: N0N 1G0

**B** Carrier / Transporteur — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

8120-4800C2

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale: 1 Rechorse Drive | City / Ville: East Saint Louis | Province: IL | Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A | Tel. No. / N° de tél.: 800) 541-5918

Vehicle / Véhicule: Trailer - Rail car No. 1 / 1e remorque - wagon | Registration No. / N° d'immatriculation: 817019 | Prov. 24: IND.

Trailer - Rail car No. 2 / 2e remorque - wagon

Port of entry / Point d'entrée: SARNIA, ON (if any) | Port of exit / Point de sortie: international use only 25

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): Rick Hall | Tel. No. / N° de tél.: 800) 541-5918

Year / Année: 07 | Month / Mois: 02 | Day / Jour: 28 | Signature: [signature]

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27: MR104103FE

**C** Receiver / consignee / Réceptionnaire / destinataire — Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 2

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A: ☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville | Province | Postal code / Code postal

E-mail / Courrier électronique | Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception: Year / Année | Month / Mois | Day / Jour | Time / Heure 29 ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30 | Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 Sub. class(es) / Classe(s) sub. | UN No. / N° NU 5 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée | Units 8 L or / ou Kg / Unités | Packaging/Contenant 9 No. / N° | Codes Int. – ext. | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | 0211 ENVIRONMENTALLY HAZARDOUS WASTE (2,4-dinitrotoluene) | N/A | N/A | NT | 45 (523) | Kg | 1 | 06 | S |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units 31 L or / ou Kg / Unités | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 Accepted / Accepté | Refused / Refusé | Decont. 35 Pack. / Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | Of / De | D or R code / Code É ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 1 | 65 | US | D05 | 49 | A1010 | H11 | Y9 | CAN | N/A | 3824.90.91.00 |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.* | Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) 37 | Signature | Tel. No. / N° de tél. ( )

Special handling / Manutention spéciale: ☐ Attached / Ci-joint ☒ As follows / Ci-contre: CLEAN HARBORS 24HR# 519-864-1201 NOTICE EXP DEC 15, 2009 22

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete. / Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.* | Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER | Signature | Tel. No. / N° de tél. 20: 810 715-2700

21 Date shipped / Date d'expédition: Year / Année: 05 | Month / Mois: 11 | Day / Jour: 15 | Time / Heure: ☐ A.M. ☐ P.M. | Scheduled arrival date / Date d'arrivée prévue: Year / Année: 05 | Month / Mois: 11 | Day / Jour: 16

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 452202186-001 50 PTW 2/10/2009 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210020730 | 1 | (800) 483-3718 | 002104975 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Beelman Trucking Company

U.S. EPA ID Number
ILR000136259

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
4090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 49000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CE3486008
ERG# 171
CHEMI, EPA ID No MIR000014530, IS ACTING AS
AOC# 486105
The Primary Exporter on behalf of the Generator
NOA NE49454-3

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month 02 Day 27 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Date leaving U.S.: 2-28-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Clayton Stephenson
Signature:
Month 02 Day 27 Year 09
Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Brittany Orr
Signature: BO
Month 2 Day 28 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49484-3**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

CH348600B A52202186-001
(Cana) 11/17/2005
CH348600B A52202186-001
(Cana) 11/17/2005

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: MIR000014530 MIR000016630

Company name / Nom de l'entreprise: Clean Harbors Env Services Inc

Mailing address / Adresse postale: 4175 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

E-mail / Courrier électronique: mchriner.amanda@cleanharbors.com
Tel. No. / N° de tél.: 810 715-2700

Shipping site address / Adresse du lieu de l'expédition: 4175 Dort Highway
City / Ville: Burton
Province: MI
Postal code / Code postal: 48529

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: 8120-4PUCC2 8120-4PUCC2

Company name / Nom de l'entreprise: Brennan Trucking Company

Mailing address / Adresse postale: 1 Rockwood Drive
City / Ville: East Saint Louis
Province: IL
Postal code / Code postal: 62205

E-mail / Courrier électronique: N/A
Tel. No. / N° de tél.: 800 541-5910

Vehicle / Véhicule — Registration No. / N° d'immatriculation — Prov.
Trailer - Rail car No. 1 / 1e remorque - wagon:
Trailer - Rail car No. 2 / 2e remorque - wagon:

Port of entry / Point d'entrée: CANPASS use only
Port of exit / Point de sortie: International use only

*Carrier Certification : I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
*Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): [illegible]
Tel. No. / N° de tél.: 800 541-5910

Year / Année | Month / Mois | Day / Jour | Signature:

## C Receiver / consignee / Réceptionnaire / destinataire

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial:

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés: [illegible]

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:
Mailing address / Adresse postale:
City / Ville | Province | Postal code / Code postal:
E-mail / Courrier électronique | Tel. No. / N° de tél.: ( )
Receiving site address / Adresse du lieu de destination:

Intended Receiver / consignee / Réceptionnaire / destinataire prévu: Clean Harbors Canada Inc
Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: A-031606
Mailing address / Adresse postale: [illegible]
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0
E-mail / Courrier électronique: butler.ann@cleanharbors.com
Tel. No. / N° de tél.: 519 864-1021
Receiving site address / Adresse du lieu de l'expédition: 4090 Butler Road RR#2
City / Ville: Corunna
Province: ON
Postal code / Code postal: N0N 1G0

Date received / Date de réception: Year / Année | Month / Mois | Day / Jour
Time / Heure: ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire
Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| | Prov. code / Code prov. | Shipping name / Appellation réglementaire | Class / Classe — Sub. class(es) / Classe(s) sub. | UN No. / N° NU | Packing / risk gr. / Gr. d'emballage / de risque | Quantity shipped / Quantité expédiée | Units / L or / ou Kg / Unités | Packaging/Contenant — No. / N° | Codes | Phys. state / État phys. | Quantity received / Quantité reçue | Units / L or / ou Kg / Unités | Comments / Commentaires | Handling Code / Code de manutention | Shipment / Envoi — Accepted / Accepté | Refused / Refusé | Decont. — Pack. Cont. | Veh. Véh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | 21LT | [illegible] | N/A | N/A | NR | [illegible] | KG | 1 | 06 | S | | | | | | | | |
| (ii) | | | | | | | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | | | | | | | |

| | Notice No. / N° de notification | Notice Line No / N° de ligne de la notification | Shipment Envoi | Of / De | D or R code / Code D ou R | C code / Code C | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE | H code / Code H | Y code / Code Y | National code in country of / Code du pays — Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | [illegible] | N/A | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| (ii) | | | | | | | | | | | | |
| (iii) | | | | | | | | | | | | |
| (iv) | | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier):

*Generator / consignor certification: I certify that the information contained in Part A is correct and complete.*
*Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA SCHRINER
Signature
Tel. No. / N° de tél.: 810 715-2700

*Receiver / consignee certification : I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*
Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie):
Signature
Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: CLEAN HARBORS 24HRS
☐ Attached /Ci-joint: ☒ As follows/ Ci-contre: 519-864-1201
NOTICE EXP DEC 15, 2009

Date shipped / Date d'expédition: Year / Année | Month / Mois | Day / Jour
Time / Heure: ☐ A.M. ☐ P.M.
Scheduled arrival date / Date d'arrivée prévue: Year / Année | Month / Mois | Day / Jour

MOE 04-1917 (07/07)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

**Copy / Copie 3 (yellow / jaune)**

A5220216-051 ACPW 2/10/2009

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1210020730 | 1 | (800) 483-3718 | 002104974 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address
Alliant Tech Systems Inc
Route 114
Radford, VA 24141
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Bentman Trucking Company

U.S. EPA ID Number
ILR000135233

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Canada Inc
1090 Telfer Road RR#1
Corunna, ON N0N 1G0
Facility's Phone: (519) 864-1021

U.S. EPA ID Number
MIR000035204

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III (2,4-DINITROTOLUENE) | 001 | DT | 51000 | P | D030 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1.CHD48600B ERG#171
CHH NF49449-1
PO# 49616/08
CHESI, EPA ID NO MIR000014530, IS ACTING AS The Primary Exporter on behalf of the Generator

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 02 27 09

**INTL**

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit: Port Huron, MI
Transporter signature (for exports only): Jerry Knapp Date leaving U.S.: 2-27-09

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802
Signature: Jerry Knapp
Month Day Year: 2 27 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H132 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Brittany Ole
Signature: BO
Month Day Year: 3 2 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

# MOVEMENT DOCUMENT / MANIFEST
# DOCUMENT DE MOUVEMENT / MANIFESTE

**NF49499-1**

*This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.*
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

## A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 1

Company name / Nom de l'entreprise

Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal

E-mail / Courrier électronique | Tel. No. / N° de tél.

Shipping site address / Adresse du lieu de l'expédition

City / Ville | Province | Postal code / Code postal

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2 | Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial

Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal

E-mail / Courrier électronique | Tel. No. / N° de tél.

Receiving site address / Adresse du lieu de l'expédition

City / Ville | Province | Postal code / Code postal

## B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 23

Company name / Nom de l'entreprise: Beelman Trucking Company

Mailing address / Adresse postale | City / Ville | Province | Postal code / Code postal

E-mail / Courrier électronique: N/A | Tel. No. / N° de tél.

| Vehicle / Véhicule | Registration No. / N° d'immatriculation | Prov. 24 |
|---|---|---|
| Trailer - Rail car No. 1 / 1re remorque - wagon | | |
| Trailer - Rail car No. 2 / 2e remorque - wagon | | |

Port of entry / Point d'entrée (destination only) | Port of exit / Point de sortie (international use only) 25

**Carrier Certification :** *I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
**Attestation du transporteur :** *J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.* 26

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie) | Tel. No. / N° de tél.

Year / Année | Month / Mois | Day / Jour | Signature

## C Receiver / consignee / Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés 27

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial 28

A031806

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☑ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville | Province | Postal code / Code postal

E-mail / Courrier électronique | Tel. No. / N° de tél.

Receiving site address / Adresse du lieu de destination: Same

Date received / Date de réception: Year / Année 09 | Month / Mois 03 | Day / Jour 02

Time / Heure 29: 07:26 ☑ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire 30

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

| Prov. code / Code prov. 3 | Shipping name / Appellation réglementaire 4 | Class / Classe 5 Sub. class(es) / Classe(s) sub. | UN No. / N° NU 6 | Packing / risk gr. / Gr. d'emballage / de risque 7 | Quantity shipped / Quantité expédiée 8 | Units / Unités 8 | Packaging / Contenant 9 No. / N° | Codes | Phys. state / État phys. 10 |
|---|---|---|---|---|---|---|---|---|---|
| (i) | [illegible] | N/A | 3082 | III | [illegible] | kg | 2 | 08 | 2 |
| (ii) | | | | | | | | | |
| (iii) | | | | | | | | | |
| (iv) | | | | | | | | | |

| Quantity received / Quantité reçue | Units / Unités 31 | Comments / Commentaires 32 | Handling Code / Code de manutention 33 | Shipment / Envoi 34 Accepted / Accepté | Refused / Refusé | Decont. 35 Pack. / Cont. | Veh. / Véh. |
|---|---|---|---|---|---|---|---|
| | kg | | 06 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Notice No. / N° de notification 11 | Notice Line No. / N° de ligne de la notification | Shipment / Envoi 12 | OI / De | D or R code / Code D ou R 13 | C code / Code C 14 | Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15 | H code / Code H 16 | Y code / Code Y 17 | National code in country of / Code du pays 18 Export / Exportation | Import / Importation | Customs code(s) / Code(s) de douanes 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (i) | [illegible] | | | [illegible] | | | | | | | |
| (ii) | | | | | | | | | | | |
| (iii) | | | | | | | | | | | |
| (iv) | | | | | | | | | | | |

International use only

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) 36

**Receiver / consignee certification :** *I certify that the information contained in Part C is correct and complete.*
**Attestation du réceptionnaire / destinataire :** *J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie) 37: Brittany Ole

Signature: BO | Tel. No. / N° de tél.: 519-864-7901

Special handling / Manutention spéciale 22: CLEAN HARBORS 24HRS

☐ Attached / Ci-joint ☑ As follows / Ci-contre : 519-864-1201
NOTICE EXP DEC 15, 2009

**Generator / consignor certification:** *I certify that the information contained in Part A is correct and complete.*
**Attestation du producteur / expéditeur:** *J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): AMANDA BOERINGER | Signature | Tel. No. / N° de tél.: 810 715-2700 20

Date shipped / Date d'expédition 21: Year / Année 09 | Month / Mois 03 | Day / Jour 02 | Time / Heure ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue: Year / Année 09 | Month / Mois 03 | Day / Jour 02

MOE 04-1917 (07/07)

*Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso*

**Copy / Copie 3 (yellow / jaune**

# Appendix C-2

# Certificates of Disposal

# Certificate of Treatment / Disposal - Storage and Transfer

Run Date: 7/10/2009

**Manifested To Site:** Lambton, ON Facility
4090 Telfer Road RR#1
Corunna, ON N0N 1G0

**EPA ID:** MIR000035204

| Manifest No. | Generation Date | Received Date |
|---|---|---|
| 002104742FLE | 2/17/2009 | 2/17/2009 |
| 002104743FLE | 2/17/2009 | 2/17/2009 |
| 002104744FLE | 2/17/2009 | 2/18/2009 |
| 002104745FLE | 2/17/2009 | 2/18/2009 |
| 002104746FLE | 2/18/2009 | 2/19/2009 |
| 002104747FLE | 2/18/2009 | 2/19/2009 |
| 002104748FLE | 2/18/2009 | 2/19/2009 |
| 002104749FLE | 2/18/2009 | 2/19/2009 |
| 002104750FLE | 2/18/2009 | 2/19/2009 |
| 002104753FLE | 2/18/2009 | 2/19/2009 |
| 002104751FLE | 2/19/2009 | 2/19/2009 |
| 002104752FLE | 2/19/2009 | 2/19/2009 |
| 002104921FLE | 2/19/2009 | 2/20/2009 |
| 002104922FLE | 2/19/2009 | 2/20/2009 |
| 002104923FLE | 2/19/2009 | 2/20/2009 |
| 002104924FLE | 2/19/2009 | 2/20/2009 |
| 002104925FLE | 2/19/2009 | 2/20/2009 |

The above described waste, received at the Clean Harbors facility listed above pursuant to the manifest(s) listed above, has been treated and/or disposed of by Clean Harbors, or another licensed facility approved by Clean Harbors, in accordance with applicable federal and state laws and regulations. Any waste received by Clean Harbors and subsequently shipped to another licensed facility has been or shall be identified as being generated by Clean Harbors in accordance with 40CFR 264.71(c).

Under civil and criminal penalties of law for the making of submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

**Signed:** Paul A. Mills **Date:** 7/10/2009

**Title:** Director Facility Applications

# Certificate of Treatment / Disposal - Storage and Transfer

Run Date: 7/10/2009

**Manifested To Site:** Lambton, ON Facility
4090 Telfer Road RR#1
Corunna, ON N0N 1G0

**EPA ID:** MIR000035204

| Manifest No. | Generation Date | Received Date |
|---|---|---|
| 002104926FLE | 2/19/2009 | 2/20/2009 |
| 002104927FLE | 2/19/2009 | 2/20/2009 |
| 002104928FLE | 2/19/2009 | 2/20/2009 |
| 002104931FLE | 2/20/2009 | 2/21/2009 |
| 002104932FLE | 2/20/2009 | 2/21/2009 |
| 002104933FLE | 2/20/2009 | 2/21/2009 |
| 002104934FLE | 2/20/2009 | 2/21/2009 |
| 002104935FLE | 2/20/2009 | 2/21/2009 |
| 002104936FLE | 2/20/2009 | 2/21/2009 |
| 002104937FLE | 2/20/2009 | 2/23/2009 |
| 002104938FLE | 2/20/2009 | 2/23/2009 |
| 002104940FLE | 2/23/2009 | 2/24/2009 |
| 002104941FLE | 2/23/2009 | 2/24/2009 |
| 002104942FLE | 2/23/2009 | 2/24/2009 |
| 002104943FLE | 2/23/2009 | 2/24/2009 |
| 002104946FLE | 2/23/2009 | 2/24/2009 |
| 002104947FLE | 2/23/2009 | 2/24/2009 |

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**Signed:** Paul A. Mills **Date:** 7/10/2009

**Title:** Director Facility Applications

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Run Date: 7/10/2009

**Manifested To Site:** Lambton, ON Facility
4090 Telfer Road RR#1
Corunna, ON N0N 1G0

**EPA ID:** MIR000035204

| Manifest No. | Generation Date | Received Date |
|---|---|---|
| 002104948FLE | 2/23/2009 | 2/24/2009 |
| 002104939FLE | 2/24/2009 | 2/24/2009 |
| 002104949FLE | 2/24/2009 | 2/25/2009 |
| 002104950FLE | 2/24/2009 | 2/25/2009 |
| 002104951FLE | 2/24/2009 | 2/25/2009 |
| 002104952FLE | 2/24/2009 | 2/25/2009 |
| 002104953FLE | 2/24/2009 | 2/25/2009 |
| 002104954FLE | 2/24/2009 | 2/25/2009 |
| 002104955FLE | 2/24/2009 | 2/25/2009 |
| 002104956FLE | 2/24/2009 | 2/25/2009 |
| 002104957FLE | 2/25/2009 | 2/26/2009 |
| 002104958FLE | 2/25/2009 | 2/26/2009 |
| 002104959FLE | 2/25/2009 | 2/26/2009 |
| 002104960FLE | 2/25/2009 | 2/26/2009 |
| 002104961FLE | 2/25/2009 | 2/26/2009 |
| 002104962FLE | 2/25/2009 | 2/26/2009 |
| 002104963FLE | 2/25/2009 | 2/26/2009 |

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**Signed:** Paul A. Mills **Date:** 7/10/2009

**Title:** Director Facility Applications

# Certificate of Treatment / Disposal - Storage and Transfer

Run Date: 7/10/2009

**Manifested To Site:** Lambton, ON Facility
4090 Telfer Road RR#1
Corunna, ON N0N 1G0

**EPA ID:** MIR000035204

| Manifest No. | Generation Date | Received Date |
|---|---|---|
| 002104964FLE | 2/26/2009 | 2/27/2009 |
| 002104965FLE | 2/26/2009 | 2/27/2009 |
| 002104966FLE | 2/26/2009 | 2/27/2009 |
| 002104967FLE | 2/26/2009 | 2/27/2009 |
| 002104968FLE | 2/26/2009 | 2/27/2009 |
| 002104969FLE | 2/26/2009 | 2/27/2009 |
| 002104972FLE | 2/26/2009 | 3/6/2009 |
| 002104976FLE | 2/26/2009 | 3/6/2009 |
| 002104973FLE | 2/27/2009 | 2/28/2009 |
| 002104974FLE | 2/27/2009 | 3/2/2009 |
| 002104975FLE | 2/27/2009 | 2/28/2009 |
| 002104970FLE | 3/5/2009 | 3/6/2009 |
| 002104971FLE | 3/5/2009 | 3/6/2009 |
| 002104977FLE | 3/5/2009 | 3/6/2009 |
| 002104978FLE | 3/5/2009 | 3/6/2009 |
| 002104979FLE | 3/5/2009 | 3/6/2009 |
| 002104980FLE | 3/5/2009 | 3/6/2009 |

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**Signed:** Paul A. Mills **Date:** 7/10/2009

**Title:** Director Facility Applications

# Certificate of Treatment / Disposal - Storage and Transfer

Run Date: 7/10/2009

**Manifested To Site:** Lambton, ON Facility
4090 Telfer Road RR#1
Corunna, ON N0N 1G0

**EPA ID:** MIR000035204

| Manifest No. | Generation Date | Received Date |
|---|---|---|
| 001202579FLE | 3/9/2009 | 3/10/2009 |
| 001202580FLE | 3/9/2009 | 3/10/2009 |
| 001202581FLE | 3/9/2009 | 3/10/2009 |
| 001202582FLE | 3/9/2009 | 3/10/2009 |
| 001202583FLE | 3/9/2009 | 3/10/2009 |
| 001202584FLE | 3/9/2009 | 3/10/2009 |
| 001202660FLE | 3/20/2009 | 3/21/2009 |
| 001202661FLE | 3/20/2009 | 3/21/2009 |
| 001202662FLE | 3/20/2009 | 3/21/2009 |
| 001202663FLE | 3/20/2009 | 3/21/2009 |
| 001202664FLE | 3/20/2009 | 3/21/2009 |
| 001202665FLE | 3/20/2009 | 3/21/2009 |
| 001202666FLE | 5/5/2009 | 5/6/2009 |
| 001202667FLE | 5/5/2009 | 5/6/2009 |

The above described waste, received at the Clean Harbors facility listed above pursuant to the manifest(s) listed above, has been treated and/or disposed of by Clean Harbors, or another licensed facility approved by Clean Harbors, in accordance with applicable federal and state laws and regulations. Any waste received by Clean Harbors and subsequently shipped to another licensed facility has been or shall be identified as being generated by Clean Harbors in accordance with 40CFR 264.71(c).

Under civil and criminal penalties of law for the making of submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

**Signed:** Paul A. Mills **Date:** 7/10/2009

**Title:** Director Facility Applications

# Appendix C-3

# Waste Profiles

# WASTE MATERIAL PROFILE SHEET

## Clean Harbors Profile No. CH348600

**A. GENERAL INFORMATION**

GENERATOR EPA ID #/REGISTRATION # *VA1210020730* GENERATOR NAME: *Alliant Tech Systems Inc*

GENERATOR CODE (Assigned by Clean Harbors) *AL3207* CITY *Radford* STATE/PROVINCE *VA* ZIP/POSTAL CODE *24141*

ADDRESS *Route 114* PHONE:

CUSTOMER CODE (Assigned by Clean Harbors) *ITC0638* CUSTOMER NAME: *Shaw Environmental*

ADDRESS *16406 US Route 224 East* CITY *Findlay* STATE/PROVINCE *OH* ZIP/POSTAL CODE *45840*

**B. WASTE DESCRIPTION**

WASTE DESCRIPTION: *2,4-DNT cont'd soils from SWMU 51* Sludge and

PROCESS GENERATING WASTE (Please provide detailed description of process generating waste):

*Removal of ash, neutralization waste and soil from a neutralization pit at Radford Army Ammunition Plant.*

**C. PHYSICAL PROPERTIES (at 25C or 77F)**

**PHYSICAL STATE**
- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
  - % FREE LIQUID
  - % SETTLED SOLID
  - % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

**NUMBER OF PHASES/LAYERS**

1 (circled) 2 3

% BY VOLUME (Approx.)

TOP *0.00*

MIDDLE *0.00*

BOTTOM *0.00*

**VISCOSITY (If liquid present)**
- 1 - 100 (e.g. WATER)
- 101 - 500 (e.g. MOTOR OIL)
- 501 - 10,000 (e.g. MOLASSES)
- > 10,000 SOLID

**COLOR**

*Brown*

**ODOR**
- [ ] NONE
- [x] MILD
- [ ] STRONG

Describe:

**BOILING POINT °F (°C)**
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

**MELTING POINT °F (°C)**
- < 140 (<60)
- 140-200 (60-93)
- > 200 (>93) (circled)

**TOTAL ORGANIC CARBON**
- [x] <= 1%
- [ ] 1-9%
- [ ] >= 10%

**FLASH POINT °F (°C)**
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93) (circled)

Actual:

**pH**
- <= 2
- 2.1 - 6.9
- 7 (Neutral)
- [x] 7.1 - 12.4
- >= 12.5

Actual:

**SPECIFIC GRAVITY**
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

NA

**ASH**
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

Actual:

**BTU/LB (MJ/kg)**
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

**VAPOR PRESSURE (for liquids only)** NA mm Hg

**D. COMPOSITION** (List the complete composition of the waste, include any inert components and /or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

| Chemical | MIN | -- | MAX | UOM | Chemical | MIN | -- | MAX | UOM |
|---|---|---|---|---|---|---|---|---|---|
| PPE, WOOD, EXPENDABLES | 0.000 | -- | 10.000 | % | SOIL/Sludge | 90.000 | -- | 100.000 | % |

**ANY METAL OBJECTs PRESENT?** YES [x] NO

If yes include dimension:

Based on A Hacked data for Sample ID's SIDW01 and SIDW02

- waste is called "Sludge" in approved work plan.

NA = Not Applicable

# Clean Harbors Profile No. CH348600

**E. CONSTITUENTS** -- Are these values based on testing or knowledge? ☑ Knowledge ✓ Testing
If constituent concentrations are base on analytical testing, analysis must be provided. If based on knowledge, basis of knowledge must be provided below.

| RCRA | REGULATED METALS | REGULATORY LEVEL (mg/l) | TCLP mg/l | TOTAL ppm |
|---|---|---|---|---|
| D004 | ARSENIC | 5.0 | ND | |
| D005 | BARIUM | 100.0 | 1.2 | |
| D006 | CADMIUM | 1.0 | ND | |
| D007 | CHROMIUM | 5.0 | ND | |
| D008 | LEAD | 5.0 | 0.29 | |
| D009 | MERCURY | 0.2 | ND | |
| D010 | SELENIUM | 1.0 | 0.06 | |
| D011 | SILVER | 5.0 | ND | |
| | **VOLATILE COMPOUNDS** | | | |
| D018 | BENZENE | 0.5 | | |
| D019 | CARBON TETRACHLORIDE | 0.5 | | |
| D021 | CHLOROBENZENE | 100.0 | | |
| D022 | CHLOROFORM | 6.0 | | |
| D028 | 1,2-DICHLOROETHANE | 0.5 | | |
| D029 | 1,1-DICHLOROETHYLENE | 0.7 | | |
| D035 | METHYL ETHYL KETONE | 200.0 | | |
| D039 | TETRACHLOROETHYLENE | 0.7 | | |
| D040 | TRICHLOROETHYLENE | 0.5 | | |
| D043 | VINYL CHLORIDE | 0.2 | | |
| | **SEMI -VOLATILE COMPOUND** | | | |
| D023 | o-CRESOL | 200.0 | | |
| D024 | m-CRESOL | 200.0 | | |
| D025 | p-CRESOL | 200.0 | | |
| D026 | CRESOL (TOTAL) | 200.0 | | |
| D027 | 1,4-DICHLOROBENZENE | 7.5 | | |
| D030 | 2,4-DINITROTOLUENE | 0.13 | 170.0000 | 2500.0000 |
| D032 | HEXACHLOROBENZENE | 0.13 | | |
| D033 | HEXACHLOROBUTADIENE | 0.5 | | |
| D034 | HEXACHLOROETHANE | 3.0 | | |
| D036 | NITROBENZENE | 2.0 | | ND |
| D037 | PENTACHLOROPHENOL | 100.0 | | |
| D038 | PYRIDINE | 5.0 | | |
| D041 | 2,4,5-TRICHLOROPHENOL | 400.0 | | |
| D042 | 2,4,6-TRICHLOROPHENOL | 2.0 | | |
| | **PESTICIDES AND HERBICIDES** | | | |
| D012 | ENDRIN | 0.02 | | |
| D013 | LINDANE | 0.4 | | |
| D014 | METHOXYCHLOR | 10.0 | | |
| D015 | TOXAPHENE | 0.5 | | |
| D016 | 2,4-D | 10.0 | | |
| D017 | 2,4,5-TP (SILVEX) | 1.0 | | |
| D020 | CHLORDANE | 0.03 | | |
| D031 | HEPTACHLOR (AND ITS EPOXIDE) | 0.008 | | |

| OTHER METALS | MIN | MAX | UOM |
|---|---|---|---|
| ALUMINUM | | | |
| ANTIMONY | | | |
| BERYLLIUM | | | |
| CALCIUM | | | |
| COPPER | | | |
| MAGNESIUM | | | |
| MOLYBDENUM | | | |
| NICKEL | | | |
| POTASSIUM | | | |
| SILICON | | | |
| SODIUM | | | |
| THALLIUM | | | |
| TIN | | | |
| VANADIUM | | | |
| ZINC | | | |
| **NON METALS** | | | |
| BROMINE | | | |
| CHLORINE | | | |
| FLUORINE | | | |
| IODINE | | | |
| SULFUR | | | |
| **OTHER NON-METALS** | | | |
| AMMONIA | | | |
| REACTIVE SULFIDE | | | |
| CYANIDE-TOTAL | 4.0 mg/kg | | |
| CYANIDE AMENABLE | | | |
| CYANIDE REACTIVE | | | |
| **OTHER CHEMICALS** | | | |
| PHENOL | | | |
| Total Petroleum Hydrocarbons | | | |

**OTHER HOCs**

☑ NONE
< 1000 PPM
>= 1000 PPM

**PCBs**

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

**ADDITIONAL HAZARDS**
DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?
YES ☑ NO (If yes, explain)

| | | |
|---|---|---|
| ASBESTOS | FUMING / SMOKING WASTE | RADIOACTIVE |
| DEA REGULATED SUBSTANCE | INFECTIOUS, PATHOGENIC, OR ETIOLOGICAL AGENT | REDUCING AGENT |
| DIOXIN | OXIDIZER | SHOCK SENSITIVE |
| EXPLOSIVE | OSHA REGULATED CARCINOGENS | SPONTANEOUSLY IGNITES WITH AIR |
| HERBICIDE | PESTICIDE | THERMALLY SENSITIVE |
| ☑ NONE OF THE ABOVE | POLYMERIZABLE | WATER REACTIVE |

TRACES OF 2,4,6 Trinitrotoluene (2700 mg/kg) NO explosive hazard.

**F. REGULATORY STATUS**

☑ YES ☐ NO USEPA HAZARDOUS WASTE?
D030

☐ YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

☑ YES ☐ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: This is subject to LDR. D030
VARIANCE INFO:

☐ YES ☑ NO IS THIS A UNIVERSAL WASTE?

☐ YES ☑ NO IS THIS A WASTEWATER PER 40 CFR PART 268.2?

☑ YES ☐ NO IF ANY WASTE CODES D001, D002, D003 (OTHER THAN REACTIVE CYANIDE OR REACTIVE SULFIDE), D004-D0011, D012-DO17 NON-WASTEWATERS, OR D018- D043 APPLY, ARE ANY UNDERLYING HAZARDOUS (UHCs) PRESENT ABOVE UNIVERSAL TREATMENT STANDARDS (UTS)?

☐ YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

☐ YES ☑ NO IS THIS WASTE SUBJECT TO CATEGORICAL PRETREATMENT DISCHARGE STANDARDS?

IF YES, SPECIFY POINT SOURCE CATEGORY LISTED IN 40 CFR PART 401.

☐ YES ☑ NO IS THIS WASTE REGULATED UNDER THE BENZENE NESHAP RULES? (IS THIS WASTE FROM A CHEMICAL MANUFACTURING, COKE BY-PRODUCT RECOVERY, OR PETROLEUM REFINERY PROCESS?)

IF YES, IS THE GENERATOR'S TOTAL ANNUAL BENZENE >= 10 MEGAGRAMS? YES NO

☐ YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

☐ YES ☑ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

☐ YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE GREATER THAN 77 KPa (11.2PSIA)?

☐ YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND ) WASTE ?

☐ YES ☑ NO IS THIS WASTE REGULATED UNDER THE OZONE DEPLETING SUBSTANCE ACT FOR ONTARIO?

**G. DOT/TDG INFORMATION**

DOT/TDG PROPER SHIPPING NAME:

**NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (2,4-DINITROTOLUENE), 9, PG III**

**H. TRANSPORTATION REQUIREMENTS**

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

IF BULK LIQUID OR BULK SOLID PLEASE INICATE THE EXPECTED NUMBER OF LOADS PER SHIPPING FREQUENCY: 0

**CONTAINERIZED**

*0-0* CONTAINERS/SHIPMENT

STORAGE CAPACITY:

CONTAINER TYPE:
- CUBIC YARD BOX
- PALLET
- ☑ TOTE TANK
- OTHER:

DRUM SIZE:

CONTAINER MATERIAL:
- STEEL
- FIBER
- PLASTIC
- OTHER

**BULK LIQUID**

GALLONS/SHIPMENT: *0 Min -0 Max* GAL.
FROM TANKS: TANK SIZE GAL.
FROM DRUMS

VEHICLE TYPE:
- VAC TRUCK
- TANK TRUCK
- RAILROAD TANK CAR

CHECK COMPATIBLE STORAGE MATERIALS.

| | |
|---|---|
| STEEL | STAINLESS STEEL |
| RUBBER LINED | FIBERGLASS LINED |
| DERAKANE | |
| OTHER | |

☑ **BULK SOLID** *22 - 0*

SHIPMENT UOM: ☑ TON YARD
PER SHIPMENT: 22.00 MIN MAX
STORAGE CAPACITY 00 TON

VEHICLE TYPE:
- ☑ DUMP TRAILER
- ROLL OFF BOX
- INTERMODAL ROLLOFF BOX
- CUSCO/VACTOR
- OTHER

**I. SPECIAL REQUEST**

SPECIFIC DISPOSAL RESTRICTIONS OR REQUESTS:

SPECIAL WASTE HANDLING REQUIREMENTS:

OTHER COMMENTS OR REQUESTS:

**J. BIENNIAL / ANNUAL REPORTING INFORMATION**

SIC CODE 2892 ~~0711~~ 2873 SOURCE CODE FORM CODE

**K. SAMPLE STATUS**

REPRESENTATIVE SAMPLE HAS BEEN SUPPLIED ☑ YES SAMPLED BY DATE SAMPLED WHERE SENT
☐ NO Results attached.

**GENERATOR'S CERTIFICATION**

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

| AUTHORIZED SIGNATURE | NAME (PRINT) | TITLE | DATE |
|---|---|---|---|
| Jeremy Flint | Jeremy Flint | Env. Eng. | 1/13/09 |

Alliant Techsystems Inc.

Shaw E & I Inc

Client Sample ID: 5IDW02

TCLP GC/MS Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9A020131-001 | **Work Order #...:** | K5E0H1AC | **Matrix.....:** | SO |
| **Date Sampled...:** | 12/30/08 | **Date Received..:** | 01/02/09 | | |
| **Leach Date.....:** | 01/05/09 | **Prep Date.....:** | 01/06/09 | **Analysis Date..:** | 01/09/09 |
| **Leach Batch #..:** | P900606 | **Prep Batch #...:** | 9006118 | | |
| **Dilution Factor:** | 500 | | | | |
| **% Moisture.....:** | | **Method.....:** | SW846 8270C | | |

TCLP

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **2,4-Dinitrotoluene** | **170000 Q** | **25000** | **ug/L** | **12000** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Fluorobiphenyl | 0.0 SRD | (37 - 107) |
| 2-Fluorophenol | 0.0 SRD | (12 - 91 ) |
| Nitrobenzene-d5 | 0.0 SRD | (46 - 103) |
| Phenol-d5 | 0.0 SRD | (10 - 71 ) |
| Terphenyl-d14 | 0.0 SRD | (66 - 124) |
| 2,4,6-Tribromophenol | 0.0 SRD | (28 - 128) |

**NOTE(S):**

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

Shaw E & I Inc

Client Sample ID: 51DW01

HPLC

| | | | |
|---|---|---|---|
| **Lot-Sample #...:** G8K210315-001 | **Work Order #...:** K3GDR2AQ | **Matrix.....:** SOLID | |
| **Date Sampled...:** 11/20/08 | **Date Received..:** 11/21/08 | | |
| **Prep Date.....:** 11/24/08 | **Analysis Date..:** 11/27/08 | | |
| **Prep Batch #...:** 8329477 | | | |
| **Dilution Factor:** 498.5 | | | |
| **% Moisture.....:** 29 | **Method.....:** SW846 8330B | | |

TOTAL

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 120 | mg/kg | 6.2 |
| 1,3-Dinitrobenzene | ND | 120 | mg/kg | 2.1 |
| **2,4-Dinitrotoluene** | **2500** | **120** | **mg/kg** | **2.6** |
| **2,6-Dinitrotoluene** | **610 J** | **620** | **mg/kg** | **3.6** |
| Nitroglycerin | ND | 250 | mg/kg | 7.5 |
| **2-Nitrotoluene** | **1300** | **120** | **mg/kg** | **6.5** |
| **4-Nitrotoluene** | **1000** | **250** | **mg/kg** | **9.1** |
| Nitrobenzene | ND | 120 | mg/kg | 8.8 |
| **1,3,5-Trinitrobenzene** | **37 J** | **120** | **mg/kg** | **5.0** |
| **2,4,6-Trinitrotoluene** | **2700** | **120** | **mg/kg** | **9.7** |
| HMX | ND | 120 | mg/kg | 6.0 |
| RDX | ND | 120 | mg/kg | 6.0 |
| Tetryl | ND | 120 | mg/kg | 5.0 |
| **3-Nitrotoluene** | **120 PG** | **120** | **mg/kg** | **7.7** |
| 4-Amino-2,6-dinitrotoluene | ND | 120 | mg/kg | 5.0 |
| PETN | ND | 250 | mg/kg | 12 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 SRD,* | (81 - 127) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery

* Surrogate recovery is outside stated control limits

J Estimated result. Result is less than RL.

PG The percent difference between the original and confirmation analyses is greater than 40%.

Shaw E & I Inc

Client Sample ID: 51DW01

HPLC

| | | | |
|---|---|---|---|
| Lot-Sample #...: G8K210315-001 | Work Order #...: K3GDR1AQ | Matrix.....: SOLID |
| Date Sampled...: 11/20/08 | Date Received..: 11/21/08 | |
| Prep Date.....: 11/24/08 | Analysis Date..: 11/26/08 | |
| Prep Batch #...: 8329477 | | |
| Dilution Factor: 0.99 | | |
| % Moisture.....: 29 | Method.....: SW846 8330B | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.012 |
| **1,3-Dinitrobenzene** | **2.9** | **0.25** | **mg/kg** | **0.0042** |
| **2,4-Dinitrotoluene** | **33 E** | **0.25** | **mg/kg** | **0.0052** |
| 2,6-Dinitrotoluene | ND | 1.2 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| Nitrobenzene | ND | 0.25 | mg/kg | 0.017 |
| **1,3,5-Trinitrobenzene** | **36 E** | **0.25** | **mg/kg** | **0.0099** |
| 2,4,6-Trinitrotoluene | ND | 0.25 | mg/kg | 0.019 |
| HMX | ND | 0.25 | mg/kg | 0.012 |
| **RDX** | **2.1** | **0.25** | **mg/kg** | **0.012** |
| Tetryl | ND | 0.25 | mg/kg | 0.0099 |
| **3-Nitrotoluene** | **170 E** | **0.25** | **mg/kg** | **0.015** |
| **4-Amino-2,6-dinitrotoluene** | **260 E** | **0.25** | **mg/kg** | **0.0099** |
| PETN | ND | 0.50 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 0.0 * | (81 - 127) |

NOTE(S):

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

Shaw E & I Inc

Client Sample ID: 51DW01

TCLP Metals

Lot-Sample #...: G8K210315-001
Date Sampled...: 11/20/08
Leach Date.....: 11/24/08
Date Received..: 11/21/08
Leach Batch #..: P832912
Matrix.....: SOLID

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...: 8330066** | | | | | | |
| Silver | ND | 0.025<br>Dilution Factor: 1 | mg/L | SW846 6010B<br>MDL.....: 0.0050 | 11/25/08 | K3GDR1AC |
| Arsenic | ND | 0.10<br>Dilution Factor: 1 | mg/L | SW846 6010B<br>MDL.....: 0.035 | 11/25/08 | K3GDR1AD |
| **Barium** | **1.2 J** | **0.50**<br>Dilution Factor: 1 | **mg/L** | **SW846 6010B**<br>MDL.....: 0.020 | **11/25/08** | **K3GDR1AE** |
| Cadmium | ND | 0.010<br>Dilution Factor: 1 | mg/L | SW846 6010B<br>MDL.....: 0.0050 | 11/25/08 | K3GDR1AF |
| Chromium | ND | 0.025<br>Dilution Factor: 1 | mg/L | SW846 6010B<br>MDL.....: 0.020 | 11/25/08 | K3GDR1AG |
| **Lead** | **0.29** | **0.050**<br>Dilution Factor: 1 | **mg/L** | **SW846 6010B**<br>MDL.....: 0.015 | **11/25/08** | **K3GDR1AH** |
| **Selenium** | **0.057 B** | **0.075**<br>Dilution Factor: 1 | **mg/L** | **SW846 6010B**<br>MDL.....: 0.035 | **11/25/08** | **K3GDR1AJ** |
| **Prep Batch #...: 8330109** | | | | | | |
| Mercury | ND | 0.0030<br>Dilution Factor: 1 | mg/L | SW846 7470A<br>MDL.....: 0.0010 | 11/25-11/26/08 | K3GDR1AM |

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

Shaw E & I Inc

Client Sample ID: 51DW01

General Chemistry

Lot-Sample #...: G8K210315-001 Work Order #...: K3GDR Matrix.....: SO
Date Sampled...: 11/20/08 Date Received..: 11/21/08
% Moisture.....: 29

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| pH | 7.6 | 0.10 | -- | SW846 9045C | 11/24/08 | 8329629 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |
| Cyanide, Total | 4.0 | 0.71 | mg/kg | SW846 9012A | 11/24/08 | 8330316 |
| | | Dilution Factor: 1 | | MDL.....: 0.54 | | |
| Ignitability | ND | -- | -- | SW846 SECTION 7.1 | 11/26/08 | 8331440 |
| | | Dilution Factor: 1 | | MDL.....: | | |
| Percent Moisture | 29.5 | 0.10 | % | ASTM D 2216-90 | 11/24-11/25/08 | 8329325 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |
| Total Sulfide | ND | 7.1 | mg/kg | SW846 9030B/9034 | 11/26/08 | 8331523 |
| | | Dilution Factor: 1 | | MDL.....: 3.4 | | |

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight

The analyte was not detected at the limit of detection

# Appendix D

## Shipping Logs

**RADFORD ARSENAL**
**Truck Log**
**Shaw Project No. 123461**
**SWMU 51**

| Date | Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net | Gross | Est Tons | Actual Tons | Variance Tons |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/17/09 | 680/38801 | 0715 | 0830 | 0002104742 FLE | CH348600B | 30,500 | 49,160 | 79,660 | 24.58 | 25.84 | 1.26 |
| 02/17/09 | 690/38802 | 0840 | 0930 | 0002104743 FLE | CH348600B | 30,500 | 48,940 | 79,440 | 24.47 | 25.78 | 1.31 |
| 02/17/09 | 678/38813 | 0935 | 1030 | 0002104744 FLE | CH348600B | 30,500 | 48,500 | 79,000 | 24.25 | 24.97 | 0.72 |
| 02/17/09 | 968/38805 | 1030 | 1130 | 0002104745 FLE | CH348600B | 29,500 | 50,100 | 79,600 | 25.05 | 25.59 | 0.54 |
| 02/18/09 | 556/38623 | 0713 | 0803 | 002104746 FLE | CH348600B | 30,700 | 48,000 | 78,700 | 24.00 | 25.29 | 1.29 |
| 02/18/09 | 917/3812 | 0737 | 0845 | 002104747 FLE | CH348600B | 30,800 | 48,500 | 79,300 | 24.25 | 24.43 | 0.18 |
| 02/18/09 | 318/38807 | 0845 | 0945 | 002104748 FLE | CH348600B | 30,000 | 49,000 | 79,000 | 24.50 | 26.06 | 1.56 |
| 02/18/09 | 7164/38628 | 0945 | 1120 | 002104749 FLE | CH348600B | 28,400 | 50,000 | 78,400 | 25.00 | 26.43 | 1.43 |
| 02/18/09 | 9166/38810 | 0945 | 1120 | 002104750 FLE | CH348600B | 28,800 | 48,000 | 76,800 | 24.00 | 23.69 | -0.31 |
| 02/18/09 | 627/222 | 1120 | 1215 | 002104751 FLE | CH348600B | 29,500 | 49,000 | 78,500 | 24.50 | 25.77 | 1.27 |
| 02/18/09 | 800/38819 | 1130 | 1230 | 002104752 FLE | CH348600B | 28,000 | 52,000 | 80,000 | 26.00 | 27.21 | 1.21 |
| 02/18/09 | 926/3803 | 1215 | 1300 | 002104753 FLE | CH348600B | 30,000 | 49,500 | 79,500 | 24.75 | 26.00 | 1.25 |
| 02/19/09 | 7177/3802 | 0720 | 0845 | 002104921 FLE | CH348600B | 28,000 | 50,000 | 78,000 | 25.00 | 25.32 | 0.32 |
| 02/19/09 | 6191/38823 | 0720 | 0845 | 002104922 FLE | CH348600B | 28,500 | 50,000 | 78,500 | 25.00 | 26.12 | 1.12 |
| 02/19/09 | 504/38629 | 0848 | 0955 | 002104923 FLE | CH348600B | 30,500 | 48,000 | 78,500 | 24.00 | 24.73 | 0.73 |
| 02/19/09 | 680/38801 | 0848 | 0955 | 002104924 FLE | CH348600B | 30,000 | 49,500 | 79,500 | 24.75 | 26.16 | 1.41 |
| 02/19/09 | 690/38802 | 1005 | 1110 | 002104925 FLE | CH348600B | 29,500 | 50,000 | 79,500 | 25.00 | 25.65 | 0.65 |
| 02/19/09 | 678/38813 | 1005 | 1110 | 002104926 FLE | CH348600B | 29,500 | 48,000 | 77,500 | 24.00 | 23.68 | -0.32 |
| 02/19/09 | 7162/38818 | 1115 | 1215 | 002104927 FLE | CH348600B | 28,000 | 49,000 | 77,000 | 24.50 | 25.07 | 0.57 |
| 02/19/09 | 968/38805 | 1115 | 1215 | 002104928 FLE | CH348600B | 29,600 | 50,000 | 79,600 | 25.00 | 26.34 | 1.34 |
| 02/20/09 | 800/38819 | 0745 | 0830 | 002104931 FLE | CH348600B | 28,000 | 51,000 | 79,000 | 25.50 | 26.92 | 1.42 |
| 02/20/09 | 556/38623 | 0830 | 0935 | 002104932 FLE | CH348600B | 30,600 | 49,000 | 79,600 | 24.50 | 25.16 | 0.66 |
| 02/20/09 | 917/3812 | 0830 | 0935 | 002104933 FLE | CH348600B | 30,500 | 49,000 | 79,500 | 24.50 | 24.31 | -0.19 |
| 02/20/09 | 318/38807 | 0945 | 1025 | 002104934 FLE | CH348600B | 30,500 | 48,000 | 78,500 | 24.00 | 24.03 | 0.03 |
| 02/20/09 | 926/3803 | 1030 | 1150 | 002104935 FLE | CH348600B | 29,500 | 50,000 | 79,500 | 25.00 | 26.10 | 1.10 |
| 02/20/09 | 627/222 | 1030 | 1150 | 002104936 FLE | CH348600B | 29,500 | 48,000 | 77,500 | 24.00 | 25.94 | 1.94 |
| 02/20/09 | 7164/38628 | 1150 | 1310 | 002104937 FLE | CH348600B | 28,000 | 51,000 | 79,000 | 25.50 | 25.67 | 0.17 |
| 02/20/09 | 9166/38810 | 1150 | 1310 | 002104938 FLE | CH348600B | 28,000 | 50,000 | 78,000 | 25.00 | 23.74 | -1.26 |
| 02/23/09 | 7177/3802 | 0720 | 0825 | 002104939 FLE | CH348600B | 28,000 | 51,000 | 79,000 | 25.50 | 25.39 | -0.11 |
| 02/23/09 | 6191/38823 | 0720 | 0825 | 002104940 FLE | CH348600B | 28,500 | 51,000 | 79,500 | 25.50 | 25.79 | 0.29 |
| 02/23/09 | 504/38629 | 0820 | 0920 | 002104941 FLE | CH348600B | 30,000 | 49,000 | 79,000 | 24.50 | 24.48 | -0.02 |
| 02/23/09 | 680/38801 | 0820 | 0920 | 002104942 FLE | CH348600B | 30,000 | 50,000 | 80,000 | 25.00 | 24.68 | -0.32 |
| 02/23/09 | 690/38802 | 0925 | 1015 | 002104943 FLE | CH348600B | 29,500 | 50,000 | 79,500 | 25.00 | 24.86 | -0.14 |
| 02/23/09 | 678/38813 | 0925 | 1015 | 002104946 FLE | CH348600B | 30,000 | 50,000 | 80,000 | 25.00 | 24.68 | -0.32 |
| 02/23/09 | 968/38805 | 1020 | 1130 | 002104947 FLE | CH348600B | 29,400 | 50,000 | 79,400 | 25.00 | 24.95 | -0.05 |
| 02/23/09 | 7162/38818 | 1020 | 1130 | 002104948 FLE | CH348600B | 28,000 | 51,000 | 79,000 | 25.50 | 25.92 | 0.42 |
| 02/24/09 | 627/222 | 0730 | 0820 | 002104949 FLE | CH348600B | 29,500 | 50,000 | 79,500 | 25.00 | 24.37 | -0.63 |
| 02/24/09 | 800/38819 | 0730 | 0820 | 002104950 FLE | CH348600B | 28,000 | 52,000 | 80,000 | 26.00 | 25.36 | -0.64 |
| 02/24/09 | 917/3812 | 0820 | 0915 | 002104951 FLE | CH348600B | 30,500 | 49,000 | 79,500 | 24.50 | 24.59 | 0.09 |
| 02/24/09 | 556/38623 | 0820 | 0915 | 002104952 FLE | CH348600B | 30,400 | 49,000 | 79,400 | 24.50 | 25.46 | 0.96 |
| 02/24/09 | 926/3803 | 0920 | 1025 | 002104953 FLE | CH348600B | 28,500 | 51,000 | 79,500 | 25.50 | 25.41 | -0.09 |
| 02/24/09 | 318/38807 | 0920 | 1025 | 002104954 FLE | CH348600B | 30,500 | 49,000 | 79,500 | 24.50 | 24.76 | 0.26 |
| 02/24/09 | 7164/38628 | 1035 | 1145 | 002104955 FLE | CH348600B | 28,000 | 51,000 | 79,000 | 25.50 | 25.63 | 0.13 |
| 02/24/09 | 9166/38810 | 1035 | 1145 | 002104956 FLE | CH348600B | 28,000 | 49,000 | 77,000 | 24.50 | 23.90 | -0.60 |
| 02/25/09 | 678/38813 | 0725 | 0825 | 002104957 FLE | CH348600B | 30,000 | 48,000 | 78,000 | 24.00 | 23.73 | -0.27 |
| 02/25/09 | 680/38801 | 0725 | 0825 | 002104958 FLE | CH348600B | 30,000 | 49,000 | 79,000 | 24.50 | 24.86 | 0.36 |
| 02/25/09 | 690/38802 | 0825 | 0930 | 002104959 FLE | CH348600B | 30,000 | 50,000 | 80,000 | 25.00 | 25.20 | 0.20 |
| 02/25/09 | 968/38805 | 0825 | 0930 | 002104960 FLE | CH348600B | 29,600 | 50,000 | 79,600 | 25.00 | 26.14 | 1.14 |
| 02/25/09 | 504/38629 | 0940 | 1020 | 002104961 FLE | CH348600B | 31,000 | 49,000 | 80,000 | 24.50 | 24.62 | 0.12 |
| 02/25/09 | 7177/3802 | 1025 | 1130 | 002104962 FLE | CH348600B | 28,000 | 51,000 | 79,000 | 25.50 | 25.34 | -0.16 |
| 02/25/09 | 6191/38823 | 1025 | 1130 | 002104963 FLE | CH348600B | 28,000 | 51,500 | 79,500 | 25.75 | 26.45 | 0.70 |
| 02/25/09 | 7162/38818 | 1300 | 1400 | 002104964 FLE | CH348600B | 28,000 | 51,500 | 79,500 | 25.75 | 26.27 | 0.52 |
| 02/26/09 | 627/222 | 0730 | 0830 | 002104965 FLE | CH348600B | 31,000 | 49,000 | 80,000 | 24.50 | 24.21 | -0.29 |
| 02/26/09 | 917/3812 | 0730 | 0830 | 002104966 FLE | CH348600B | 30,500 | 49,000 | 79,500 | 24.50 | 24.35 | -0.15 |
| 02/26/09 | 556/38623 | 0830 | 0915 | 002104967 FLE | CH348600B | 30,400 | 49,000 | 79,400 | 24.50 | 25.04 | 0.54 |
| 02/26/09 | 800/38819 | 0830 | 0915 | 002104968 FLE | CH348600B | 28,800 | 51,000 | 79,800 | 25.50 | 26.43 | 0.93 |
| 02/26/09 | 926/3803 | 0930 | 1005 | 002104969 FLE | CH348600B | 30,300 | 49,500 | 79,800 | 24.75 | 25.27 | 0.52 |
| 02/27/09 | 968/38805 | 0835 | 0950 | 002104973 FLE | CH348600B | 29,600 | 50,000 | 79,600 | 25.00 | 25.94 | 0.94 |
| 02/27/09 | 7177/3802 | 0835 | 0950 | 002104974 FLE | CH348600B | 28,000 | 51,000 | 79,000 | 25.50 | 25.28 | -0.22 |
| 02/27/09 | 504/38629 | 1005 | 1115 | 002104975 FLE | CH348600B | 31,000 | 49,000 | 80,000 | 24.50 | 25.32 | 0.82 |
| 03/05/09 | 678/38813 | 0735 | 0915 | 002104970 FLE | CH348600B | 30,000 | 50,000 | 80,000 | 25.00 | 24.74 | -0.26 |
| 03/05/09 | 680/38801 | 0735 | 0915 | 002104971 FLE | CH348600B | 30,000 | 50,000 | 80,000 | 25.00 | 24.73 | -0.27 |
| 03/05/09 | 690/38802 | 0920 | 1020 | 002104972 FLE | CH348600B | 30,000 | 49,500 | 79,500 | 24.75 | 24.65 | -0.10 |
| 03/05/09 | 968/38805 | 0920 | 1020 | 002104976 FLE | CH348600B | 29,600 | 50,000 | 79,600 | 25.00 | 25.80 | 0.80 |
| 03/05/09 | 9168/38812 | 1030 | 1130 | 002104977 FLE | CH348600B | 29,500 | 50,000 | 79,500 | 25.00 | 25.55 | 0.55 |
| 03/05/09 | 917/3812 | 1030 | 1500 | 002104978 FLE | CH348600B | 30,500 | 49,000 | 79,500 | 24.50 | 24.33 | -0.17 |
| 03/05/09 | 556/38623 | 1130 | 1500 | 002104979 FLE | CH348600B | 30,400 | 48,000 | 78,400 | 24.00 | 23.58 | -0.42 |
| 03/05/09 | 800/38819 | 1515 | 1545 | 002104980 FLE | CH348600B | 28,000 | 51,000 | 79,000 | 25.50 | 25.91 | 0.41 |
| 03/09/09 | 678/38813 | 0735 | 0840 | 001202579 FLE | CH348600B | 30,000 | 50,000 | 80,000 | 25.00 | 25.58 | 0.58 |
| 03/09/09 | 690/38802 | 0735 | 0840 | 001202580 FLE | CH348600B | 30,000 | 48,000 | 78,000 | 24.00 | 24.14 | 0.14 |
| 03/09/09 | 556/38623 | 0845 | 0930 | 001202581 FLE | CH348600B | 30,400 | 49,000 | 79,400 | 24.50 | 24.18 | -0.32 |
| 03/09/09 | 917/3812 | 0845 | 0930 | 001202582 FLE | CH348600B | 30,000 | 49,000 | 79,000 | 24.50 | 25.00 | 0.50 |
| 03/09/09 | 800/38819 | 0945 | 1045 | 001202583 FLE | CH348600B | 28,800 | 51,000 | 79,800 | 25.50 | 25.36 | -0.14 |
| 03/09/09 | 968/38805 | 0945 | 1045 | 001202584 FLE | CH348600B | 29,600 | 50,000 | 79,600 | 25.00 | 26.48 | 1.48 |
| | 74 loads | | | | | | | | **1,837.60** | **1,866.71** | 29.11 |

# Appendix E

## QC Reports

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**From - 12/16/08 - 12/18/08**
**and 12/30/2008**

**Weather:**
Temp: 36-48 degrees, windy and partly cloudy

**Description of Work:**
Limited site work, mainly set up of work area, review of work plans and safety plans
Brought in geoprobe to obtain a composite sample for the disposal facility
Installed silt fence and high visibility fencing around the excavation area
Worked on setting up various accounts to support field work, fuel, trucking and backfill material

**Delays in Schedule:**
Awaiting sample results from 12/30/08 composite to obtain approval of waste at disposal facility

**Verbal Instructions:**
None

| Shipments: | 12/30/2008 |
|---|---|
| Trucks loaded: today | 0 |
| Estimated tons shipped: today | 0 |
| Trucks loaded: to date | 0 |
| estimated tons shipped: to date | 0 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | S. Kritak | S. Banks | C. Brinser | G. Griswold |
| USACE Representative | S. Epps | | | |
| Apex Environmental | | | | |
| | | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/07/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Rental |
| Cat 563 Roller | | Rental |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Monday, January 05, 2009**

**Weather:**
Temp: 36-42 degrees, windy and partly cloudy

**Description of Work:**
Limited site work, mainly set up of work area, review of work plans and safety plans
Waiting for delivery of Shaw pick up trucks and Excavator, spending majority of time familarizing crew with work plan and safety plans
repaired silt fence and high visibility fencing around the excavation area damaged over holiday mainly during high winds
Worked on setting up various accounts to support field work, fuel, trucking and backfill material

**Delays in Schedule:**
Awaiting sample results from 12/30/08 composite to obtain approval of waste at disposal facility
Inclement weather and holiday schedule delayed delivery of equipment to site

**Verbal Instructions:**
None

| Shipments: | Date |
|---|---|
| Trucks loaded: today | 0 |
| Estimated tons shipped: today | 0 |
| Trucks loaded: to date | 0 |
| estimated tons shipped: to date | 0 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | S. Kritak | S. Banks | C. Brinser | G. Griswold |
| Apex Environmental | | | | |
| | | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | | Shaw |
| 2004 Chevy Colorado 4x4 | | Shaw |
| 2006 Chevy 4x4 Silverado | | Shaw |
| JD 650 Dozer | | Rental |
| Cat 563 Roller | | Rental |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Friday, February 06, 2009**

**Weather:**
Temp: 40 - 45, slight breeze and mostly sunny

**Description of Work:**
For the last 2 1/2 weeks project was on hold while questions concerning exporting of waste to Canada were being resolved. Today we were allowed to break ground and excavate to obtain 32 ounce sample of sludge to ship to Clean Harbors Canada for their treatability study.
Excavation at location 4E was begun to a depth approximately 10 feet below the surface and a small sample was obtained. After the sample was collected and the sample equipment decontaminated the waste was bagged and put in a drum already located in the waste storage area on the base. The excavation was then backfilled.

**Delays in Schedule:**
Sample sent to Clean Harbors Canada waiting for treatability study results and then truck schedule.

**Verbal Instructions:**
None

| Shipments: | Date |
|---|---|
| Trucks loaded: today | 0 |
| Estimated tons shipped: today | 0 |
| Trucks loaded: to date | 0 |
| estimated tons shipped: to date | 0 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | S. Kritak | S. Banks | C. Brinser | G. Griswold |
| Apex Environmental | | | | |
| | | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Rental |
| Cat 563 Roller | | Rental |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Friday, February 06, 2009**

**Weather:**
Temp: 40 - 45, slight breeze and mostly sunny

**Description of Work:**
For the last 2 1/2 weeks project was on hold while questions concerning exporting of waste to Canada were being resolved. Today we were allowed to break ground and excavate to obtain 32 ounce sample of sludge to ship to Clean Harbors Canada for their treatability study.
Excavation at location 4E was begun to a depth approximately 10 feet below the surface and a small sample was obtained. After the sample was collected and the sample equipment decontaminated the waste was bagged and put in a drum already located in the waste storage area on the base. The excavation was then backfilled.

**Delays in Schedule:**
Sample sent to Clean Harbors Canada waiting for treatability study results and then truck schedule.

**Verbal Instructions:**
None

| Shipments: | Date |
|---|---|
| Trucks loaded: today | 0 |
| Estimated tons shipped: today | 0 |
| Trucks loaded: to date | 0 |
| estimated tons shipped: to date | 0 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | S. Kritak | S. Banks | | |
| Apex Environmental | | | | |
| | | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Rental |
| Cat 563 Roller | | Rental |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Monday, February 16, 2009**

**Weather:**
Temp: 30 - 40 degrees, cold, cloudy with snow showers and gusty winds (+20 mph)

**Description of Work:**
Repaired high visibility fence around site and added some erosion control fence
Excavated area between sample location 3 and 4 to find sludge material
Stockpiled overburden material along perimeter for use as backfill
Sampled general fill and top soil from off site source and sent to Lab
Resampled overburden material for TCL VOC's due to lab error

**Delays in Schedule:**
Samples sent to TestAmerica Lab in California

**Verbal Instructions:**
None

| Shipments: | Date |
|---|---|
| Trucks loaded: today | 0 |
| Estimated tons shipped: today | 0 |
| Trucks loaded: to date | 0 |
| estimated tons shipped: to date | 0 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | S. Kritak | S. Banks | C. Brinser | G. Griswold |
| Apex Environmental | | | | |
| USACE | S. Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Rental |
| Cat 563 Roller | | Rental |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Tuesday, February 17, 2009**

**Weather:**
Temp: 28 - 47 degrees, Cold AM. Sunny and warming PM, no wind

**Description of Work:**
First 4 trucks arrived on site together at 0700, checked in first truck and escorted to site at 0715, loaded truck and had back to gate 10 by 0
Second truck into site at 0840, loaded and back to gate 10 by 0930, escorted both trucks to the scale at shipping and receiving after manife
Third truck brought into site at 0935, loaded and escorted back to gate 10 at 1030, when truck came out to gate and was on hard ground hi
up and the driver informed me he was probably overweight, he was escorted back into the site had 1/2 bucket removed and brought back t
Fourth truck brought into the site at 1030 laoded and back out to gate 10 with truck 3 at 1130, paperwork completed and trucks escorted to

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net |
|---|---|---|---|---|---|---|
| #380/38801 | 0715 | 0830 | 0002104742 FLE | CH348600B | 30,500 | 49,160 |
| #690/38802 | 0840 | 0930 | 0002104743 FLE | CH348600B | 30,500 | 48,940 |
| #678/38813 | 0935 | 1030 | 0002104744 FLE | CH348600B | 30,500 | 48,500 |
| #968/38805 | 1030 | 1130 | 0002104745 FLE | CH348600B | 29,500 | 50,100 |
| **Note: Gross weights on these trucks were obtained by actual weight at Radford scale** | | | | | | 196,700 |

After loadout was completed we continued to dig to determine the extent of sludge heading north from starting point (51DE04)
Secured site at approximately 1640 and left for Gate 10, off site 1700 hrs.

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date |
|---|---|
| Trucks loaded: today | 4 |
| Estimated pounds shipped: today | 196,700 |
| Trucks loaded: to date | 4 |
| estimated pounds shipped: to date | 196,700 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | S. Kritak | S. Banks | C. Brinser | G. Griswold |
| Apex Environmental | Donald | | | |
| USACE | S. Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Rental |
| Cat 563 Roller | | Rental |

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| Gross | Est. Weight |
|---|---|
| 79,660 | 49,000 |
| 79,440 | 49,500 |
| 79,000 | 49,000 |
| 79,600 | 50,000 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Wednesday, February 18, 2009**

**Weather:**
Temp: 28 - 47 degrees, Snow, Rain and Sleet until noon, Rain showers in afternoon

**Description of Work:**
Trucks began arriving at 0700 and after being checked by security they were escorted into the arsenak through Gate 10.
The process continued throughout the day without incident or delay. Excavation towards the north stopped as material is getting close to th
we swithced directions and continued loading the last 3 trucks, 8 total for the day. All trucks off site by 1:30 pm and then we cleaned up the
tomorrows trucks. The roadway needed to be cleaned of some mud tracked by the trucks from the clean loading aarea which was slightly t

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 556/38623 | 0713 | 0803 | 002104746 FLE | CH348600B | 30,700 | 48,000 |
| 917/3812 | 0737 | 0845 | 002104747 FLE | CH348600B | 30,800 | 48,500 |
| 318/38807 | 0845 | 0945 | 002104748 FLE | CH348600B | 30,000 | 49,000 |
| 7164/38628 | 0945 | 1120 | 002104749 FLE | CH348600B | 28,400 | 50,000 |
| 9166/38810 | 0945 | 1120 | 002104750 FLE | CH348600B | 28,800 | 48,000 |
| 627/222 | 1120 | 1215 | 002104751 FLE | CH348600B | 29,500 | 49,000 |
| 800/38819 | 1130 | 1230 | 002104752 FLE | CH348600B | 28,000 | 52,000 |
| 926/3803 | 1215 | 1300 | 002104753 FLE | CH348600B | 30,000 | 49,500 |
| | | | | | | 394,000 |

After loadout was completed we cleaned uo site and roadway which became muddy as the rainy day continued also set up for tomorrow's t
Secured site at approximately 1645 and left for Gate 10, off site 1700 hrs.

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date |
|---|---|
| Trucks loaded: today | 4 |
| Estimated pounds shipped: today | 394,000 |
| Trucks loaded: to date | 4 |
| estimated pounds shipped: to date | 590,700 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | S. Kritak | S. Banks | C. Brinser | G. Griswold |
| Apex Environmental | | | | |
| USACE | S. Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Rental |
| Cat 563 Roller | | Rental |

ıe silt fence we inst
area and set uı
ore up because of th

| Gross (est.) |
|---|
| 78,700 |
| 79,300 |
| 79,000 |
| 78,400 |
| 76,800 |
| 78,500 |
| 80,000 |
| 79,500 |

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**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Thursday, February 19, 2009**

**Weather:**
Temp: 23 - 45d egrees, Snow showers off and on all day, extremely windy gusts 25 - 30 mph

**Description of Work:**
Trucks began arriving at 0700 and after being checked by security they were escorted into the arsenak through Gate 10.
The process continued throughout the day without incident or delay.
Started excavation and loadout from the south edge of the pit working out towards the road, switched back to northwest corner for last two
There is still sludge material on north side of excavation approximately halfway between 51DE04 and 51DE05.
All trucks loaded and off site by 2:00 pm, worked on excavation of sidewall to clean remaining materials.
Found clean face on western sidewall between 51DE05 and 51DE03 approximately four feet from sample locations 51DE08 and 51DE09.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 7177/3802 | 0720 | 0845 | 002104921 FLE | CH348600B | 28,000 | 50,000 |
| 6191/38823 | 0720 | 0845 | 002104922 FLE | CH348600B | 28,500 | 50,000 |
| 504/38629 | 0848 | 0955 | 002104923 FLE | CH348600B | 30,500 | 48,000 |
| 680/38801 | 0848 | 0955 | 002104924 FLE | CH348600B | 30,000 | 49,500 |
| 690/38802 | 1005 | 1110 | 002104925 FLE | CH348600B | 29,500 | 50,000 |
| 678/38813 | 1005 | 1110 | 002104926 FLE | CH348600B | 29,500 | 48,000 |
| 7162/38818 | 1115 | 1215 | 002104927 FLE | CH348600B | 28,000 | 49,000 |
| 968/38805 | 1115 | 1215 | 002104928 FLE | CH348600B | 29,600 | 50,000 |
| | | | | | | 394,500 |

After loadout was completed we cleaned up site and roadway which was muddy again from trucks and prepared for tomorrow's trucks
Ordered Case 580 backhoe to help keep areas clean of mud, will be onsite tomorrow
Secured site at approximately 1645 and left for Gate 10, off site 1700 hrs.

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 8 | |
| Estimated pounds shipped: today | 394,500 | |
| Trucks loaded: to date | 20 | TONS |
| estimated pounds shipped: to date | 985,200 | 492.60 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | S. Kritak | S. Banks | C. Brinser | G. Griswold |
| Apex Environmental | | | | |
| USACE | S. Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Rental |
| Cat 563 Roller | | Rental |

tru

| Gross (est.) |
| --- |
| 78,000 |
| 78,500 |
| 78,500 |
| 79,500 |
| 79,500 |
| 77,500 |
| 77,000 |
| 79,600 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Friday, February 20, 2009**

**Weather:**
Temp: 18 - 35 degrees today, sunny but windy w/gusts to 30 mph

**Description of Work:**
Trucks began arriving at 0700 and after being checked by security they were escorted into the arsenak through Gate 10.
The process continued throughout the day without incident or delay.
Loaded out remaining material in the northwest corner of excavation, still chasing material towards 51DE05 location.
All trucks loaded and off site by 2:00 pm, worked on excavation of sidewall to clean remaining materials.
Planning to work part day Saturday to clean up and consolidate overburden material

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 800/38819 | 0745 | 0830 | 002104931 FLE | CH348600B | 28,000 | 51,000 |
| 556/38623 | 0830 | 0935 | 002104932 FLE | CH348600B | 30,600 | 49,000 |
| 917/3812 | 0830 | 0935 | 002104933 FLE | CH348600B | 30,500 | 49,000 |
| 318/38807 | 0945 | 1025 | 002104934 FLE | CH348600B | 30,500 | 48,000 |
| 926/3803 | 1030 | 1150 | 002104935 FLE | CH348600B | 29,500 | 50,000 |
| 627/222 | 1030 | 1150 | 002104936 FLE | CH348600B | 29,500 | 48,000 |
| 7164/38628 | 1150 | 1310 | 002104937 FLE | CH348600B | 28,000 | 51,000 |
| 9166/38810 | 1150 | 1310 | 002104938 FLE | CH348600B | 28,000 | 50,000 |
| | | | | | | 396,000 |

Continued to remove overburden at northwest corner and chase sludge material, reinstalled silt fence out approximately 25 feet beyond sample locations 51DE08 and 51DE09.
After loadout was completed we cleaned up site and roadway and prepared for Monday's trucks
JCB backhoe arrived on site today making clean up of loading area and roadway easier.
Secured site at approximately 1645 and left for Gate 10, off site 1700 hrs.

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 8 | | |
| Estimated pounds shipped: today | 396,000 | | |
| Trucks loaded: to date | 28 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 1,381,200 | **690.60** | **24.66** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | Stephen Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Hertz |
| JCB Backhoe | 02/20/09 | Hertz |

| Gross (est.) |
| --- |
| 79,000 |
| 79,600 |
| 79,500 |
| 78,500 |
| 79,500 |
| 77,500 |
| 79,000 |
| 78,000 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Monday, February 23, 2009**

**Weather:**
Temp: 18 - 35 degrees today, sunny but windy w/gusts to 30 mph

**Description of Work:**
Trucks began arriving at 0700 and after being checked by security they were escorted into the arsenak through Gate 10.
The process continued throughout the morning without incident or delay, no problems today and trucks moved in and out quickly.
From 51DE03 to 51DE05 the excavation is to clean sidewalls and bottom
All trucks loaded and off site by Noon, crew broke for lunch and then returned and continued to work on excavation.
Working southern half of excavation this afternoon, from 51DE03 to 51DE02, have enough material to loadout tomorrow, sidewall on east is

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 7177/3802 | 0720 | 0825 | 002104939 FLE | CH348600B | 28,000 | 51,000 |
| 6191/38823 | 0720 | 0825 | 002104940 FLE | CH348600B | 28,500 | 51,000 |
| 504/38629 | 0820 | 0920 | 002104941 FLE | CH348600B | 30,000 | 49,000 |
| 680/38801 | 0820 | 0920 | 002104942 FLE | CH348600B | 30,000 | 50,000 |
| 690/38802 | 0925 | 1015 | 002104943 FLE | CH348600B | 29,500 | 50,000 |
| 678/38813 | 0925 | 1015 | 002104946 FLE | CH348600B | 30,000 | 50,000 |
| 968/38805 | 1020 | 1130 | 002104947 FLE | CH348600B | 29,400 | 50,000 |
| 7162/38818 | 1020 | 1130 | 002104948 FLE | CH348600B | 28,000 | 51,000 |
| | | | | | | 402,000 |

After loadout was completed we cleaned up site and roadway and prepared for Monday's trucks
Went to hazardous waste storage building and moved drum to SWMU 51 to load into trucks, per instructions.
Secured site at approximately 1645 and left for Gate 10, off site 1600 hrs.

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 8 | | |
| Estimated pounds shipped: today | 402,000 | | |
| Trucks loaded: to date | 36 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 1,783,200 | 891.60 | 24.77 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | Stephen Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Hertz |
| JCB Backhoe | 02/20/09 | Hertz |

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| Gross (est.) |
| --- |
| 79,000 |
| 79,500 |
| 79,000 |
| 80,000 |
| 79,500 |
| 80,000 |
| 79,400 |
| 79,000 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Tuesday, February 24, 2009**

**Weather:**
Temp: 25 - 45 degrees today, partly cloudy - am and sunny - pm

**Description of Work:**
Trucks began arriving at 0700 and after being checked by security they were escorted into the arsenak through Gate 10.
The process continued throughout the morning without incident or delay, no problems today and trucks moved in and out quickly.
Excavated from 51DE02 toward 51DE01 (south) to find the end of the sludge, from 51DE02 to 51DE01 was the thickest layer of sludge we
All trucks loaded and off site by Noon, crew broke for lunch and then returned and continued to work on excavation.
Excavation clean from 51DE05 to 51DE02 on both sides and bottom.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 627/222 | 0730 | 0820 | 002104949 FLE | CH348600B | 29,500 | 50,000 |
| 800/38819 | 0730 | 0820 | 002104950 FLE | CH348600B | 28,000 | 52,000 |
| 917/3812 | 0820 | 0915 | 002104951 FLE | CH348600B | 30,500 | 49,000 |
| 556/38623 | 0820 | 0915 | 002104952 FLE | CH348600B | 30,400 | 49,000 |
| 926/3803 | 0920 | 1025 | 002104953 FLE | CH348600B | 28,500 | 51,000 |
| 318/38807 | 0920 | 1025 | 002104954 FLE | CH348600B | 30,500 | 49,000 |
| 7164/38628 | 1035 | 1145 | 002104955 FLE | CH348600B | 28,000 | 51,000 |
| 9166/38810 | 1035 | 1145 | 002104956 FLE | CH348600B | 28,000 | 49,000 |
| | | | | | | 400,000 |

After loadout was completed we cleaned up site and roadway and prepared for Monday's trucks
Emptieddrum from hazardous waste storage area and returned empty drum to storage area, per directions
Secured site at approximately 1600 and left for Gate 10, off site 1630 hrs.

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 8 | | |
| Estimated pounds shipped: today | 400,000 | | |
| Trucks loaded: to date | 44 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 2,183,200 | 1,091.60 | 24.81 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | Stephen Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Hertz |
| JCB Backhoe | 02/20/09 | Hertz |

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| Gross (est.) |
| --- |
| 79,500 |
| 80,000 |
| 79,500 |
| 79,400 |
| 79,500 |
| 79,500 |
| 79,000 |
| 77,000 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Wednesday, February 25, 2009**

**Weather:**
Temp: 25 - 50 degrees today, partly cloudy - am and sunny - pm

**Description of Work:**
Trucks began arriving at 0700 and after being checked by security they were escorted into the arsenak through Gate 10.
The process continued throughout the morning without incident or delay, no problems today and trucks moved in and out quickly.
Excavated from 51DE02 toward 51DE01 (south) to find the end of the sludge, from 51DE02 to 51DE01 was the thickest layer of sludge we
All trucks loaded and off site by Noon, crew broke for lunch and then returned and continued to work on excavation.
Found area along south west side between 51DE01 and 51DE02 that ran towards the west outside the silt fence line we established, remov
removed sludge, need some additional trucks for the extra material we removed, ordered them for Friday.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 678/38813 | 0725 | 0825 | 002104957 FLE | CH348600B | 30,000 | 48,000 |
| 680/38801 | 0725 | 0825 | 002104958 FLE | CH348600B | 30,000 | 49,000 |
| 690/38802 | 0825 | 0930 | 002104959 FLE | CH348600B | 30,000 | 50,000 |
| 968/38805 | 0825 | 0930 | 002104960 FLE | CH348600B | 29,600 | 50,000 |
| 504/38629 | 0940 | 1020 | 002104961 FLE | CH348600B | 31,000 | 49,000 |
| 7177/3802 | 1025 | 1130 | 002104962 FLE | CH348600B | 28,000 | 51,000 |
| 6191/38823 | 1025 | 1130 | 002104963 FLE | CH348600B | 28,000 | 51,500 |
| 7162/38818 | 1300 | 1400 | 002104964 FLE | CH348600B | 28,000 | 51,500 |
| | | | | | | 400,000 |

After loadout was completed we cleaned up site and roadway and prepared for Thursday's trucks
Secured site at approximately 1600 and left for Gate 10, off site 1630 hrs.

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 8 | | |
| Estimated pounds shipped: today | 400,000 | | |
| Trucks loaded: to date | 52 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 2,583,200 | 1,291.60 | 24.84 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | Stephen Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental |
|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw |
| JD 650 Dozer | | Hertz |
| JCB Backhoe | 02/20/09 | Hertz |

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ved fence

| Gross (est.) |
| --- |
| 78,000 |
| 79,000 |
| 80,000 |
| 79,600 |
| 80,000 |
| 79,000 |
| 79,500 |
| 79,500 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Thursday, February 26, 2009**

**Weather:**
Temp:35 - 60 degrees today, Partly sunny, no wind

**Description of Work:**
Trucks began arriving at 0700 and after being checked by security they were escorted into the arsenak through Gate 10.
The process continued throughout the morning without incident or delay, no problems today and trucks moved in and out quickly.
5 trucks scheduled today, spending remaining time cleaning out little areas of material and chasing small veins in sidewalls.
All trucks loaded and off site by Noon, crew broke for lunch and then returned and continued to work on excavation.
Northwest corner had area of sludge remaining that went further west then anticipated, removed another truck or two worth of waste, contin material, have enough for 3 trucks tomorrow, will then have to enter excavation with excavator to clean bottom areas to deep to reach from

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 627/222 | 0730 | 0830 | 002104965 FLE | CH348600B | 31,000 | 49,000 |
| 917/3812 | 0730 | 0830 | 002104966 FLE | CH348600B | 30,500 | 49,000 |
| 556/38623 | 0830 | 0915 | 002104967 FLE | CH348600B | 30,400 | 49,000 |
| 800/38819 | 0830 | 0915 | 002104968 FLE | CH348600B | 28,800 | 51,000 |
| 926/3803 | 0930 | 1005 | 002104969 FLE | CH348600B | 30,300 | 49,500 |
| | | | | | | 247,500 |

After loadout was completed we cleaned up site and roadway and prepared for Friday's trucks
Secured site at approximately 1500 and left for Gate 10, off site 1530 hrs.

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 5 | | |
| Estimated pounds shipped: today | 247,500 | | |
| Trucks loaded: to date | 57 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 2,830,700 | 1,415.35 | 24.83 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | Stephen Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| JD 650 Dozer | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

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| Gross (est.) |
| --- |
| 80,000 |
| 79,500 |
| 79,400 |
| 79,800 |
| 79,800 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Friday, February 27, 2009**

**Weather:**
Temp: 35 - 40 degrees today, cloudy, with rains beginning around 9 AM

**Description of Work:**
Trucks didn't arrive until 0830 this morning and after being checked by security they were escorted into the arsenal through Gate 10.
Only 3 trucks were ordered today as we are getting to the end of the excavation at SWMU51
Rains caused the area around the excavation to get very muddy and the site was shut down and secured at noon.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 968/38805 | 0835 | 0950 | 002104973 FLE | CH348600B | 29,600 | 50,000 |
| 7177/3802 | 0835 | 0950 | 002104974 FLE | CH348600B | 28,000 | 51,000 |
| 504/38629 | 1005 | 1115 | 002104975 FLE | CH348600B | 31,000 | 49,000 |
| | | | | | | 150,000 |

Donald Smith from Apex was on site this morning to photograph and measure excavation.
After loadout was completed we cleaned up site and roadway and secured site for the weekend.

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 3 | | |
| Estimated pounds shipped: today | 150,000 | | |
| Trucks loaded: to date | 60 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 2,980,700 | 1,490.35 | 24.84 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | Don Smith | | | |
| USACE | Stephen Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| JD 650 Dozer | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

Hertz Equipment picked up the backhoe this morning at Gate 10

**Gross (est.)**

79,600

79,000

80,000

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Monday, March 02, 2009**

**Weather:**
Temp: 25degrees today, snow and extremely cold, with gusty winds

**Description of Work:**
Went into the site to start equipment and check on condition of the site

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No trucks scheduled | | | | | | |

**Delays in Schedule:**
Weather delay today

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 60 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 2,980,700 | 1,490.35 | 24.84 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | Don Smith | | | |
| USACE | Stephen Epps | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| JD 650 Dozer | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Tuesday, March 03, 2009**

**Weather:**
Temp: 25 - 35 degrees today, extremely cold and windy, sunny

**Description of Work:**
Began cleaning up site from the weather damage, repaired silt fence and high visibility fence around excavation.
Excavated along sidewalls to ensure all contaminated material has been removed
Prepared for additional trucks on Thursday, ( 8 Scheduled ) - left site at 3:00 pm.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No trucks scheduled | | | | | | |

**Delays in Schedule:**
Weather delay today

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 60 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 2,980,700 | **1,490.35** | **24.84** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| JD 650 Dozer | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Wednesday, March 04, 2009**

**Weather:**
Temp: 35 - 45 degrees today, partly sunny and breezy

**Description of Work:**
Continued cleaning up site from the weather damage, repaired silt fence and high visibility fence around excavation.
Took post excavation samples from sidewalls and bottom on northern half of the excavation
Site visit to SWMU 39 with Tim Leahy and Anthony Montouth of the USACE to obtain sample for disposal facility and review logistics of the

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No trucks scheduled | | | | | | |

**Delays in Schedule:**
Weather delay today, area extremely wet and muddy

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 60 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 2,980,700 | **1,490.35** | **24.84** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| JD 650 Dozer | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Thursday, March 05, 2009**

**Weather:**
Temp: 35 - 45 degrees today, sunny and cold

**Description of Work:**
Trucks scheduled into site today to continue cleanup of SWMU 51, eight trucks scheduled
Area still very muddy and the ground is soft in loading area, 2 trucks became stuck, excavator was able to aid the first stuck truck but the se
was off the roadway and to far away for excavator to assist, tow truck was called in to pull truck out of the mud, held up operations for about
Continued loading remaining trucks without incident, off site at 1630 hours.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 678/38813 | 0735 | 0915 | 002104970 FLE | CH348600B | 30,000 | 50,000 |
| 680/38801 | 0735 | 0915 | 002104971 FLE | CH348600B | 30,000 | 50,000 |
| 690/38802 | 0920 | 1020 | 002104972 FLE | CH348600B | 30,000 | 49,500 |
| 968/38805 | 0920 | 1020 | 002104976 FLE | CH348600B | 29,600 | 50,000 |
| 9168/38812 | 1030 | 1130 | 002104977 FLE | CH348600B | 29,500 | 50,000 |
| 917/3812 | 1030 | 1500 | 002104978 FLE | CH348600B | 30,500 | 49,000 |
| 556/38623 | 1130 | 1500 | 002104979 FLE | CH348600B | 30,400 | 48,000 |
| 800/38819 | 1515 | 1545 | 002104980 FLE | CH348600B | 28,000 | 51,000 |
| | | | | | | 397,500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 8 | | |
| Estimated pounds shipped: today | 397,500 | | |
| Trucks loaded: to date | 68 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 3,378,200 | 1,689.10 | 24.84 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| JD 650 Dozer | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

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t 4+ h

| Gross (est.) |
| --- |
| 80,000 |
| 80,000 |
| 79,500 |
| 79,600 |
| 79,500 |
| 79,500 |
| 78,400 |
| 79,000 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Friday, March 06, 2009**

**Weather:**
Temp: 35 - 45 degrees today, sunny and cold

**Description of Work:**
No trucks scheduled today, site very wet and muddy, snow and frozen ground thawing and causing area to become to soft to load trucks today
Cleaning roadway from muddy residue from yesterdays trucks, cleaning area where trucks are staged to be loaded and repairing fence
Reviewed air monitoring results with USACE since he wasn"t present at start of project and had some questions. Informed him that we have problems with readings even approaching action levels.
Scheduled six (6) trucks for Monday, should be the end of the SWMU 51 excavation, off site at 1500 hours

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| NO TRUCKS SCHEDULED TODAY | | | | | | |

**Delays in Schedule:**
Muddy area delayed loading trucks today

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 68 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,378,200 | **1,689.10** | **24.84** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| JD 650 Dozer | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Monday, March 09, 2009**

**Weather:**
Temp: 50 - 60 degrees today, sunny and very windy

**Description of Work:**
Trucks scheduled into site today to continue cleanup of SWMU 51, six trucks scheduled
Area dried out very well over the weekend, trucks moved in and out of the site without incident.
Last trucks were loaded and out of the site by 1045 am. 1100 hours took Don Smith from Apex into the site to obtain measurements and ph
Crew escorted him into the site and assisted with measurements, out of the site at 1145 hours, crew broke for lunch and then returned to cl
and excavator. Fueling machine this afternoon and securing site for the night, off site at 1500 hours today
SWMU 51 completed visually, will take remaining samples tomorrow and await results.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 678/38813 | 0735 | 0840 | 001202579 FLE | CH348600B | 30,000 | 50,000 |
| 690/38802 | 0735 | 0840 | 001202580 FLE | CH348600B | 30,000 | 48,000 |
| 556/38623 | 0845 | 0930 | 001202581 FLE | CH348600B | 30,400 | 49,000 |
| 917/3812 | 0845 | 0930 | 001202582 FLE | CH348600B | 30,000 | 49,000 |
| 800/38819 | 0945 | 1045 | 001202583 FLE | CH348600B | 28,800 | 51,000 |
| 968/38805 | 0945 | 1045 | 001202584 FLE | CH348600B | 29,600 | 50,000 |
| | | | | | | 297,000 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 6 | | |
| Estimated pounds shipped: today | 297,000 | | |
| Trucks loaded: to date | 74 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,675,200 | **1,837.60** | **24.83** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| JD 650 Dozer | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

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ean roac

| Gross (est.) |
| --- |
| 80,000 |
| 78,000 |
| 79,400 |
| 79,000 |
| 79,800 |
| 79,600 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**3/10/2009 - 3/13/2009**

**Weather:**
N/A

**Description of Work:**
Tuesday samples were taken from remaining portion of the excavation, samples 51SC15 - 51SC26 plus 3 duplicate samples and one MSM were taken, packaged and sent to Test America.
Wednesday crews spent day cleaning equipment and securing the site for an extended weekend. Supervision took time to plan for equipme SWMU 39 work which tentatively is scheduled to begin on or around Monday March 23rd.
Thursday crew was demobilized from the site for rotation home, Supervision will continue working on procurement and H&S amendment for

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| NO TRUCKS TODAY | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 74 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,675,200 | **1,837.60** | **24.83** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| JD 650 Dozer | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

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ent and material

chain saw acti

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Monday, March 16, 2009**

**Weather:**
Cold 35 - 45 degrees, Cloudy today

**Description of Work:**
Crew back to the site this morning after rotation home for long weekend, making repairs to the fence and silt fence around SWMU 51
Preparing safety plan amendment for the SWMU 39 tree removal and procurring and testing of equipment to perform work
Still waiting for remainder of sample results from SWMU 51

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| NO TRUCKS TODAY | | | | | | |

**Delays in Schedule:**
Awaiting sample results

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 74 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,675,200 | **1,837.60** | **24.83** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Tuesday, March 17, 2009**

**Weather:**
Cold 35 - 45 degrees, Cloudy today

**Description of Work:**
Crew on site this morning reviewed health and safety plan for chain saw work and checking out equipment
Gave copy of Safety plan amendment to the USACE for his review
Still waiting for remainder of sample results from SWMU 51
Continued working on procurement of equipment for SWMU 39

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| NO TRUCKS TODAY | | | | | | |

**Delays in Schedule:**
Awaiting sample results

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 74 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,675,200 | **1,837.60** | **24.83** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Wednesday, March 18, 2009**

**Weather:**
Cold 35 - 45 degrees, Cloudy today

**Description of Work:**
Crew on site this morning and preparing to excavate some additional benching at SWMU 51, sample results were received today and there will be additional soils to be removed
Scheduling 6 trucks for Friday to remove additional material from sample locations that came back above cleanup limits
Majority of hot material is located in the bottom of the excavation.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| NO TRUCKS TODAY | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 74 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,675,200 | **1,837.60** | **24.83** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Thursday, March 19, 2009**

**Weather:**
Partly cloudy around 50, afternoon showers predicted

**Description of Work:**
Crew on site this morning and continuing to excavate additional benching at SWMU 51
Sample results were completed and additional material will be shipped tomorrow
Sample results: 51SC12,13,14,16,18 and 20 (all bottom samples) were above the clean up limit
Sample results: 51SC02,03,08,10,17,19,21,23, and 25 (all sidewall) samples were above clean up limits
Prepared manifests and dropped of for signatures today.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| NO TRUCKS TODAY | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 74 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,675,200 | **1,837.60** | **24.83** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Friday, March 20, 2009**

**Weather:**
Partly sunny around 50, no wind

**Description of Work:**
Crew onsite this morning and trucks began arriving at 0700. Security checked in trucks and crew prepared to excavate and load trucks. Crew began escorting trucks and loading at 0730 today.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| 6191/38823 | 0730 | 0830 | 001202660 FLE | CH348600B | 28,500 | 51,000 |
| 7175/38803 | 0730 | 0830 | 001202661 FLE | CH348600B | 28,300 | 50,000 |
| 318/38807 | 0835 | 0930 | 001202662 FLE | CH348600B | 30,500 | 49,000 |
| 9168/38812 | 0835 | 0930 | 001202663 FLE | CH348600B | 29,400 | 48,000 |
| 7162/38818 | 0930 | 1030 | 001202664 FLE | CH348600B | 28,000 | 51,900 |
| 7172/38826 | 0930 | 1030 | 001202665 FLE | CH348600B | 28,300 | 50,000 |
| | | | | | | 299,900 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 6 | | |
| Estimated pounds shipped: today | 299,900 | | |
| Trucks loaded: to date | 80 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 3,975,100 | 1,987.55 | 24.84 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

| Gross (est.) |
| --- |
| 79,500 |
| 78,300 |
| 79,500 |
| 77,400 |
| 79,900 |
| 78,300 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Monday, March 23, 2009**

**Weather:**
Partly sunny around 45 degrees, no wind

**Description of Work:**
Crew on site at 0700 and preparing to retake samples at locations that were previously above the clean up limits and re-excavated and ship
15 sample locations taken today, packaged and sent to TestAmerica for analysis, sample depth aveaged approximately 15' bgs.
Excavation depth was increased by second excavation to about 25' bgs.
Meeting held today at SWMU 39, to discuss procedures to enter and work at next area, will begin clearing and grubbing tomorrow.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 80 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,975,100 | **1,987.55** | **24.84** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 51**

**Tuesday, March 24, 2009**

**Weather:**
Partly Cloudy, Windy and 35-45 degrees

**Description of Work:**
Crew on site at 0700 reviewed tailgate safety meeting, Amendment to H&S plan for chain saw/chipper operations and new JSA with crew.
Entered SWMU 39 (Explosive Incinerator Site) at approximately 0745 to begin clearing and grubbing activities
Clearing operations went very well today, no incidents or problems were encountered, notified control room that we were complete and out
Cancelled work for tomorrow at SWMU 39 due to heavy rains forecasted.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 80 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 3,975,100 | 1,987.55 | 24.84 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| | | Hertz | |
| JCB Backhoe | 02/20/09 | Hertz | 02/27/09 |

of area at 160

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, May 22, 2009**

**Weather:**
Sunny/Clear - Cool (am) / Warm (pm) - (60-75 degrees today)

**Description of Work:**
Partial crew onsite this morning at 0700 to continue backfill operations at SWMU 51
JWB had 6 trucks running backfill material to SWMU 51 today, continued working until 1700 hours.
JWB Contractors delivered 30 loads of clean fill today, at 10 cyds/load (per discussions with Jeff Buchinsky). Off site 1300 hrs.
Crew demobilized home for Memorial Day Weekend, will start up again on Tuesday, weather permitting.

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, May 26, 2009**

**Weather:**
Cloudy/Showers (50-60 degrees)

**Description of Work:**
Partial crew onsite this morning at 0700 to continue backfill operations at SWMU 51
Weather not cooperating and borrow area to wet to get trucks into for backfill material.
Completed install of backfill material stockpiled on Friday before the holiday weekend.
Also went over and photographed and walked SWMU 54 and the small arms reserve firing range for upcoming bids

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, May 27, 2009**

**Weather:**
Cloudy/Showers (50-60 degrees)

**Description of Work:**
Partial crew onsite this morning at 0700 to continue backfill operations at SWMU 51
Weather still not cooperating and borrow area to wet to get trucks into for backfill material.
Into SWMU 39 today to pull final samples and test remaining areas using XRF.
Moved Shaw Cat 330 from SWMU 39 to FLFA after decon of machine was complete.
All samples tested were good except one which was sent to lab for confirmation along with one additional sample to meet requirements for

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

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**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, May 28, 2009**

**Weather:**
Cloudy/Showers (50-60 degrees)

**Description of Work:**
Crew onsite this morning at 0700 to continue backfill operations at SWMU 51
Weather still not cooperating and borrow area to wet to get trucks into for backfill material.
Worked on SWMU 51 cleaning up area and trying to help dry out to allow backfill to continue
Met with plant safety and received permits for SWMU 41 well drilling operations

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, May 29, 2009**

**Weather:**
Cloudy/Showers (50-60 degrees)

**Description of Work:**
Crew onsite this morning at 0700 the rains yesterday made backfill impossible for today
Weather still not cooperating and borrow area to wet to get trucks into for backfill material.
Serviced equipment and vehicles today, made arrangements to move tracked equipment around site

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
Rain

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 01, 2009**

**Weather:**
Sunny and Warm 70 degrees today

**Description of Work:**
Crew onsite this morning at 0700 thesite is drying out, will regrade SWMU 51 to aid drying
Hertz equipment on site moving equipment, Decon of JD 200 today for demobilization

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
Rain

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, June 02, 2009**

**Weather:**
Sunny and Warm 70 degrees today

**Description of Work:**
Crew onsite this morning at 0700 Backfill trucks resume today
Trucks being signed in and searched at Gate 10, will run as many as possible today
Drillers beginning to work at SWMU 41 today also, no luck hit refusal in 2 separate locations today

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 211 | 2110 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, June 03, 2009**

**Weather:**
Partly Sunny and Warm 70 - 80 degrees today

**Description of Work:**
Crew onsite this morning at 0700 Backfill trucks resume today
Trucks being signed in and searched at Gate 10, will run as many as possible today
Drillers attempting 3rd and final hole today at SWMU 41 refusal again today, will not continue
SWMU 51 backfill complete, 250 loads brings area to grade minus topsoil layer

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, June 04, 2009**

**Weather:**
Partly Sunny and Warm 70 - 80 degrees today

**Description of Work:**
Crew onsite this morning at 0700 beginning decon of equipment at SWMU 51
Cleaning up roadway at SWMU 51 and preparing for move to FLFA
Drillers on site moving drums (7) to storage area, could not complete without Shaw crew assisting

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/04/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, June 05, 2009**

**Weather:**
Rainy today 70 - 80 degrees today

**Description of Work:**
Crew onsite this morning at 0700 continuing decon of equipment at SWMU 51
Consolidationg drillers drums from 7 into 5 for sampling and disposal at later date
Crew off site at noon today due to weather

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 08, 2009**

**Weather:**
partly cloudy, warm today 70 - 80 degrees today

**Description of Work:**
Crew onsite this morning at 0700 Starting at FLFA today
Delineation of 4 excavation areas and installeation of silt fence around area completed today.
Making arrangements for backfill at SWMU 39 as soon as possible
Area by sink hole under water and too soft to allow excavator

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, June 09, 2009**

**Weather:**
Showers today, 70-75 degrees

**Description of Work:**
Crew onsite this morning at 0700 Starting at FLFA today
Complete setup work at FLFA today
Could not begin backfill at SWMU 39 everything to wet

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
Rain held up work today

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, June 10, 2009**

**Weather:**
Clearing, Warm 70-80 degrees

**Description of Work:**
Crew onsite this morning at 0700, backfill for SWMU 39 to begin today
Incinerator shutting down to allow backfill to begin
JWB trucks at gate 10 being signed in and inspected for today
8 Trucks running today for JWB with backfill

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 79 | 790 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, June 11, 2009**

**Weather:**
Showers today, cool 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, backfillmaterial to wet to haul today
Incinerator shutting down will begin stockpiling material on hill to northeast of ponds for topsoil use
Scheduled repairs to Shaw 330 excavator with Shaw equipment group and Carter machinery

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 79 | 790 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, June 12, 2009**

**Weather:**
Clearing today, cool 60 - 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, backfill material to wet to haul today
Incinerator shutting down will continue stockpiling material on hill to northeast of ponds for topsoil use

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 79 | 790 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 15, 2009**

**Weather:**
Cloudy, Showers today, cool 50 - 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, backfill continuing today everything appears dry enough to work
Incinerator shutting down will continue importing of backfill to SWMU 39
Trucks at Gate 10 being inspected and signed in for the day

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 159 | 1590 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, June 16, 2009**

**Weather:**
Showers today, cool 50 - 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, no backfill today
Incinerator shutting down will continue on stockpile of top soil from mound at northeast side of ponds
Making arrangements for FLFA to start when work cannot be done at SWMU 39

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 159 | 1590 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, June 17, 2009**

**Weather:**
Rain continued today, cool 50 - 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, No Work can be performed
Sending crew home foor a few days, will restart work on Monday 6/22/09
Made arrangements for backfill to restart on June 22, 2009, weather permitting

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 159 | 1590 |

**Delays in Schedule:**
weather delays ( June 17, 18 and 19)

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 22, 2009**

**Weather:**
Clear and Warming 70 - 80 degress today

**Description of Work:**
Crew onsite this morning at 0700, areas dry and backfill operations continues
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
Wanda Jines stated incinerator will be down from 6/25 through 7/3 and we can work later those days

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, June 24, 2009**

**Weather:**
Sunny and Warm 70 - 80 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 438 | 4380 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, June 25, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 561 | 5610 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, June 26, 2009**

**Weather:**
Partly Cloudy and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 685 | 6850 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 29, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 809 | 8090 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, July 01, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1061 | 10610 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, July 02, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1171 | 11710 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, July 03, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Holiday today, crew sent home for long weekend

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1171 | 11710 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, July 06, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew mobilizing back to site today, preparing areas after weekend rains to accept trucks tomorrow

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1171 | 11710 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, July 07, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, back on original schedule with shutdown of incinerator
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1250 | 12500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, July 08, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator down again will work till 5 pm
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1346 | 13460 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, July 09, 2009**

**Weather:**
Partly Cloudy and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator down again will work till 7 pm
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1466 | 14660 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, July 10, 2009**

**Weather:**
Cloudy, Cool 50-65 degrees

**Description of Work:**
Site to wet to accept trucks heavy showers over night, moving material around site grading and compacting
Incinerator restarting today at 4:00 pm

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| | | |
| **Total SWMU39 backfill** | 1466 | 14660 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, July 13, 2009**

**Weather:**
Partly Cloudy 65 - 75 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator down again will work till 7 pm
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1550 | 15500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, July 14, 2009**

**Weather:**
Sunny/Cool 45 - 75 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator running out by 4:00 pm

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1621 | 16210 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, July 15, 2009**

**Weather:**
Sunny/Warm 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator running out by 4:00 pm
At end of day moved equipment out of SWMU 39, dozer to SWMU 51 and Excavator to FLFA

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| Wednesday, July 15, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1705 | 17050 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |

| | | | |
|---|---|---|---|
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, July 16, 2009**
**Friday, July 17, 2009**

**Weather:**
Showers 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, moved to FLFA, incinerator cannot shut down for 10 days
Sampled drums from drilling at SWMU 41 and prepared FLFA for excavation activities
Also worked both days at SWMU 51 grading area and repairing rain damage
let crew go early Friday due to heavy rains

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| Wednesday, July 15, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1705 | 17050 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |

| | | | |
|---|---|---|---|
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, July 20, 2009**

**Weather:**
Heavy Rain today

**Description of Work:**
NO WORK TODAY

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| Wednesday, July 15, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1705 | 17050 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |

| | | | |
|---|---|---|---|
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, July 21, 2009**

**Weather:**
Cloudy/Humid 55-75 degrees

**Description of Work:**
Mobilized to FLFA and began excavation at the area.
Had plant utility people on site to help locate water line running along roadway to bottom of burn pit from top parking area
determined line below 1 foot level we are removing and will be cautious when digging near line
Stockpiling material at top of slope area for loadout beginning tomorrow
Walked burn pad to remove any debris which could puncture truck tires

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | 0 | |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, July 22, 2009**

**Weather:**
Partly Cloudy today 55-75 degrees

**Description of Work:**
On site at FLFA, tailgat held and work plan discussed with crew
Thompson trucking scheduled 6 trucks today, staggered 1 hour apart
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving
Continued excavating after loadout completed, discovered buried drum (30 gal) and stopped work, notified ATK and USACE and waited for response from Fire Dept and Safety Dept. Drum removed at ATK's direction and liquid sampled. Overpacked drum in a 55 gallon steel drum and moved to storage area, continued excavation after drum secured

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3432/86 | 0750 | 0830 | RAAP 0001 | 29,880 | 53,400 | 83,280 |
| 3135/54 | 0900 | 0925 | RAAP 0002 | 30,740 | 52,700 | 83,440 |
| 3130/58 | 0950 | 1025 | RAAP 0003 | 30,340 | 54,440 | 84,780 |
| 3145/53 | 1030 | 1100 | RAAP 0004 | 31,400 | 52,920 | 84,320 |
| 3455/44 | 1130 | 1200 | RAAP 0005 | 28,900 | 55,420 | 84,320 |
| 3455/92 | 1300 | 1415 | RAAP 0006 | 30,500 | 53,440 | 83,940 |
| | | | | | 322,320 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 6 | |
| Estimated pounds shipped: today | 322,320 | |
| Trucks loaded: to date | 6 | TONS |
| estimated pounds shipped: to date | 322,320 | 161.16 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, July 23, 2009**

**Weather:**
Sunny/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgat held and work plan discussed with crew
Thompson trucking scheduled 11 trucks today, staggered 30 minutes apart
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
Continued excavating after loadout completed, uncovered terra cota pipe from seprtic tank, ATK Utility department
on site to check and gave us permission to remove since tank and system were disconnected and abandoned.

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3432/86 | 0730 | 0800 | RAAP 0007 | 29,740 | 52,920 | 82,660 |
| 3135/54 | 0830 | 0850 | RAAP 0008 | 30,760 | 52,740 | 83,500 |
| 3145/53 | 0950 | 1015 | RAAP 0009 | 31,300 | 51,820 | 83,120 |
| 3455/42 | 1130 | 1200 | RAAP 0010 | 29,160 | 51,540 | 80,700 |
| 3427/63 | 1150 | 1210 | RAAP 0011 | 29,040 | 52,880 | 81,920 |
| 224 | 1245 | 1305 | RAAP 0012 | 25,620 | 42,400 | 68,020 |
| 3081 | 1245 | 1315 | RAAP 0013 | 25,960 | 48,960 | 74,920 |
| 3578 | 1315 | 1345 | RAAP 0014 | 25,380 | 42,280 | 67,660 |
| 3200 | 1315 | 1345 | RAAP 0015 | 24,880 | 43,680 | 68,560 |
| 429 | 1315 | 1345 | RAAP 0016 | 24,700 | 41,700 | 66,400 |
| 3087/13 | 1350 | 1415 | RAAP 0017 | 28,100 | 51,920 | 80,020 |
| | | | RAAP 0018 | 0 | 0 | 0 |
| | | | | | 532,840 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 11 | |
| Estimated pounds shipped: today | 532,840 | |
| Trucks loaded: to date | 17 | TONS |
| estimated pounds shipped: to date | 855,160 | 427.58 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |

| | | | |
|---|---|---|---|
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, July 24, 2009**

**Weather:**
Sunny/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgat held and work plan discussed with crew
No Trucks today, continued excavating and began XRF of areas previously excavated and stockpiles loaded out the past few days. Excavation remaining can be completed and stockpiled in various locations to expedite future loadouts.
Also spent time regrading SWMU 51 in preparation for top soil placement scheduled for next week

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | RAAP 0018 | 0 | 0 | 0 |
| | | | | | 0 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 0 | |
| Estimated pounds shipped: today | 0 | |
| Trucks loaded: to date | 17 | TONS |
| estimated pounds shipped: to date | 855,160 | 427.58 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, July 27, 2009**

**Weather:**
Partly Cloudy/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Thompson trucking scheduled 7 trucks today,should complete excavation if field testing has been accurate
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
FLFA excavation complete today, need 3 more trucks to finish shipments.

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3169/86 | 0925 | 1000 | RAAP 0018 | 29,620 | 45,280 | 74,900 |
| 3135/54 | 0930 | 1000 | RAAP 0019 | 30,720 | 50,100 | 80,820 |
| 3190/60 | 1000 | 1035 | RAAP 0020 | 30,540 | 53,360 | 83,900 |
| 3145/53 | 1000 | 1030 | RAAP 0021 | 32,020 | 50,180 | 82,200 |
| 3437/56 | 1045 | 1130 | RAAP 0022 | 29,680 | 54,080 | 83,760 |
| 3160 | 1325 | 1415 | RAAP 0023 | 25,500 | 49,740 | 75,240 |
| 3153 | 1325 | 1415 | RAAP 0024 | 25,760 | 48,980 | 74,740 |
| | | | | | 351,720 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 7 | |
| Estimated pounds shipped: today | 351,720 | |
| Trucks loaded: to date | 24 | TONS |
| estimated pounds shipped: to date | 1,206,880 | 603.44 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, July 28, 2009**

**Weather:**
Partly Cloudy/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Thompson trucking scheduled 3 trucks today,should complete loadout if field testing has been accurate
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
FLFA loadout almost completed today, need one additional truck, all XRF tests came back clean.

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3166 | 1345 | 1400 | RAAP 0025 | 25,480 | 48,900 | 74,380 |
| 3578 | 1405 | 1420 | RAAP 0026 | 25,580 | 45,240 | 70,820 |
| 3196/63 | 1430 | 1450 | RAAP 0027 | 29,120 | 54,780 | 83,900 |
| | | | | 0 | 0 | 0 |
| | | | | | 148,920 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 3 | |
| Estimated pounds shipped: today | 148,920 | |
| Trucks loaded: to date | 27 | TONS |
| estimated pounds shipped: to date | 1,355,800 | 677.90 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, July 29, 2009**

**Weather:**
Cloudy/Showers today 65-75 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Thompson trucking scheduled 1 last truck today, will complete loadout at FLFA
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
FLFA loadout almost completed today, need one additional truck, all XRF tests came back clean, packing samples today

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3455/42 | 1245 | 1330 | RAAP 0028 | 30,120 | 48,220 | 78,340 |
| | | | | 0 | 0 | 0 |
| | | | | | 48,220 | |

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 1 | |
| Estimated pounds shipped: today | 48,220 | |
| Trucks loaded: to date | 28 | **TONS** |
| estimated pounds shipped: to date | 1,404,020 | **702.01** |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, July 30, 2009**

**Weather:**
Cloudy/Showers today 65-75 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Decontamination of equipment on schedule for today
Clean up entire FLFA area being conducted, cleaning roadways and raking burn pad surface to remove tracks from trucks and equipment, leaving area as clean as prior to work on site
Informed today that SWMU 39 will not be shutting down next week as they need more time to play catch up

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | | 0 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 0 | |
| Estimated pounds shipped: today | 0 | |
| Trucks loaded: to date | 28 | TONS |
| estimated pounds shipped: to date | 1,404,020 | 702.01 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, July 31, 2009**

**Weather:**
Showers 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, back at gate 10 for backfill at SWMU 51
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Started backfill had to stop when rains started and became heavy, stopped at 1500 hours for weekend

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, August 03, 2009**

**Weather:**
Cloudy/Humid 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, back at FLFA finishing decon and service of equipment
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Pulling samples, per contract, for backfill material at JWB stockpile. 18 samples pulled, packaged and shipped to TestAmerica
Called of rent Hertz JD 200, they will pick up ASAP

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 13 | 130 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, August 04, 2009**

**Weather:**
Cloudy/Humid 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, back at FLFA finishing decon and service of equipment
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Completing clean up and servicing of equipment and vehicles today
Called off Shaw Cat 330 Excavator, equipment group will let sit until needed or demobilization of site

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 13 | 130 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, August 05, 2009**

**Weather:**
Cloudy/Humid 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, back at FLFA Hertz picking up JD 200 Excavator today
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Completing clean up and servicing of equipment and vehicles today
Regrading SWMU 51 after rains to repair damage, Hertz moved dozer there today

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 13 | 130 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, August 06, 2009**

**Weather:**
Cloudy/Humid 75 - 85 degress today

**Description of Work:**
Back at JWB stockpile of fill material have to resample 18 locations, first set of samples came into lab to warm to use
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Completing clean up and servicing of equipment and vehicles today
Shut site down completely for the next week, will restart Aug. 17, 2009

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 13 | 130 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, August 17, 2009**

**Weather:**
Sunny/Hot 75 - 95 degress today

**Description of Work:**
Back at Gate 10, backfill trucks being checked into the site and Incinerator down at 0730
SWMU 39 accessable again to Shaw starting today
Escorting trucks into site with backfill, JWB has 8 trucks running today ( 84 loads)
Hertz delivered JD 544 Loader today and moved Dozer from SWMU 51 to SWMU 39

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 29 | 290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Backfill SWMU 39 | Loads |
|---|---|
| Wednesday, June 10, 2009 | 79 |
| Monday, June 15, 2009 | 80 |
| Monday, June 22, 2009 | 91 |
| Tuesday, June 23, 2009 | 92 |
| Wednesday, June 24, 2009 | 96 |
| Thursday, June 25, 2009 | 123 |
| Friday, June 26, 2009 | 124 |
| Monday, June 29, 2009 | 124 |
| Tuesday, June 30, 2009 | 132 |
| Wednesday, July 01, 2009 | 120 |
| Thursday, July 02, 2009 | 110 |
| Tuesday, July 07, 2009 | 79 |
| Wednesday, July 08, 2009 | 96 |
| Thursday, July 09, 2009 | 120 |
| Monday, July 13, 2009 | 84 |
| Tuesday, July 14, 2009 | 71 |
| Wednesday, July 15, 2009 | 84 |
| Monday, August 17, 2009 | 84 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU39 backfill** | 1789 |

| Total Cyds |
|---|
| 790 |
| 800 |
| 910 |
| 920 |
| 960 |
| 1230 |
| 1240 |
| 1240 |
| 1320 |
| 1200 |
| 1100 |
| 790 |
| 960 |
| 1200 |
| 840 |
| 710 |
| 840 |
| 840 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 17890 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, August 18, 2009**

**Weather:**
Partly Sunny 75 - 85 degress today

**Description of Work:**
Crew at Gate 10, backfill trucks being checked into the site and tailgate held
Escorting trucks into site with backfill, JWB has 7 trucks running today (76 loads)
Finished with general fill today, continued moving top soil from onsite pile to ponds

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 29 | 290 |

| Backfill SWMU 39 | Loads |
|---|---|
| Wednesday, June 10, 2009 | 79 |
| Monday, June 15, 2009 | 80 |
| Monday, June 22, 2009 | 91 |
| Tuesday, June 23, 2009 | 92 |
| Wednesday, June 24, 2009 | 96 |
| Thursday, June 25, 2009 | 123 |
| Friday, June 26, 2009 | 124 |
| Monday, June 29, 2009 | 124 |
| Tuesday, June 30, 2009 | 132 |
| Wednesday, July 01, 2009 | 120 |
| Thursday, July 02, 2009 | 110 |
| Tuesday, July 07, 2009 | 79 |
| Wednesday, July 08, 2009 | 96 |
| Thursday, July 09, 2009 | 120 |
| Monday, July 13, 2009 | 84 |
| Tuesday, July 14, 2009 | 71 |
| Wednesday, July 15, 2009 | 84 |
| Monday, August 17, 2009 | 84 |
| Tuesday, August 18, 2009 | 76 |
| **Total SWMU39 backfill** | 1865 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 790 |
| 800 |
| 910 |
| 920 |
| 960 |
| 1230 |
| 1240 |
| 1240 |
| 1320 |
| 1200 |
| 1100 |
| 790 |
| 960 |
| 1200 |
| 840 |
| 710 |
| 840 |
| 840 |
| 760 |
| 18650 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, August 19, 2009**

**Weather:**
Partly Sunny 80 - 90 degress today

**Description of Work:**
Crew at Gate 10, Top Soil trucks being checked into the site and tailgate held
Escorting trucks into site with backfill, JWB has 6 trucks running today (34 loads)
Started importing Top Soil for SWMU 39 today and continued moving top soil from onsite pile also today

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, August 20, 2009**

**Weather:**
Cloudy/Showers today 80-90 degrees

**Description of Work:**
Crew at Gate 10, No Top Soil trucks today rains yesterday evening made are to wet
Cleaning roadway in front of Incinerator because of mud dragged out yesterday by trucks
Continued moving top soil from onsite pile also today and moved debris from SWMU 39 to SWMU 51 for disposal next week

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, August 21, 2009**

**Weather:**
Rain Showers today 80-90 degrees

**Description of Work:**
Crew at Gate 10, tailgate and work plans discussed
No Top Soil trucks today due to rains
Moving equipment from SWMU 39 to FLFA for Top Soil next week, Incinerator needs to run all next week

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, August 24, 2009**

**Weather:**
Cloudy/Cool today 55-70 degrees

**Description of Work:**
Crew at FLFA today, tailgate and work plans discussed
Top Soil trucks begin today at FLFA after lab results confirmed excavations all good
Escorting trucks in through shipping and receiving, Gate 15 today

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
SWMU 39 access denied today

**Verbal Instructions:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total FLFA Top Soil** | 57 |

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

| Total Cyds |
|---|
| 570 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 570 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, August 25, 2009**

**Weather:**
Clear/Sunny today 75 - 85 degrees

**Description of Work:**
Crew at FLFA today, tailgate and work plans discussed, safety audit by Scott Logan of Knoxville today
Top Soil brought into site yesterday being moved around slopes with loader and excavator
Waiting for Hertz to move dozer from SWMU 39 to allow final grading at FLFA

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
SWMU 39 access denied today

**Verbal Instructions:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total FLFA Top Soil** | 57 |

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

| Total Cyds |
|---|
| 570 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 570 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, August 27, 2009**

**Weather:**
Clear/Sunny today 80 - 90 degrees

**Description of Work:**
Crew at FLFA today, tailgate and work plans discussed for today
Top Soil brought into site being fine graded with dozer on slopes today
Moving JD 544 Loader to SWMU 51 this afternoon, cleaning roads and area from top soil placement

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
SWMU 39 access denied today

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, August 28, 2009**

**Weather:**
Cloudy/Showers today 70 - 80 degrees

**Description of Work:**
Crew at FLFA today, tailgate and work plans discussed for today
Completed final grading of slopes in preparation for hydro seeding
Decon of dozer being completed and transport back to SWMU 39 scheduled this afternoon

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
SWMU 39 access denied today

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, August 31, 2009**

**Weather:**
Cloudy/Cool today 60 - 70 degrees

**Description of Work:**
Crew at Gate 10 today JWB bring Top Soil for SWMU 39, tailgate and work plans discussed for today
Guard checking and signing ib trucks for entry to Arsenal
JWB running 8 trucks today with top soil ( 56 loads) and continued moving on site top soil pile

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 90 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 900 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, September 01, 2009**

**Weather:**
Cloudy/Cool today 60 - 70 degrees

**Description of Work:**
Crew atGate 10 today JWB bring Top Soil for SWMU 39, tailgate and work plans discussed for today
Guard checking and signing in trucks for entry to Arsenal
JWB running 8 trucks today with top soil ( 53 loads) and sent 7 loads of top soil to SWMU 51
Completed moving on site top soil pile into ponds

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 36 | 360 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 143 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 1430 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, September 02, 2009**

**Weather:**
Cloudy/Cool today 50 - 70 degrees

**Description of Work:**
Crew atGate 10 today JWB bring Top Soil for SWMU 39, tailgate and work plans discussed for today
Guard checking and signing in trucks for entry to Arsenal
JWB running 8 trucks today with top soil ( 53 loads) and sent 9 loads of top soil to SWMU 51

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 196 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 0 |
| 0 |
| 0 |
| |
| 1960 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, September 03, 2009**

**Weather:**
Sunny/Cool today 50 - 75 degrees

**Description of Work:**
Crew atGate 10 today JWB bring Top Soil for SWMU 39, tailgate and work plans discussed for today
Guard checking and signing in trucks for entry to Arsenal, attended short meeting with Incinerator Supervisor about access
JWB running 10 trucks today with top soil (83 loads) and began repairing swale and roads
TOP SOIL complete at SWMU 39 and 51 and Hydro Seed set for September 11, 2009

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, September 04, 2009**

**Weather:**
Sunny/Clear today 70 - 80 degrees

**Description of Work:**
Crew atGate tailgate and work plans discussed for today, final grading at SWMU 39 and finish repairs to roadway
Guard checking in trucks for entry to Arsenal with crusher run stone to reapir road ( 2 loads)
JWB hauled away debris from SWMU 51 to recycler (fence, post and barb wire)

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, September 08, 2009**
**Wednesday, September 09, 2009**
**Thursday, September 10, 2009**

**Weather:**
Partly Cloudy/ Warm today 70 - 80 degrees

**Description of Work:**
Spent these 3 days decontaminating equipment and vehicles and shipping off site
Securing all equipment and storing for SWMU 54 work to begin in the next few months
Gregory Seed on site Wednesday to check out three areas

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | 09/10/09 |
| JD 700 Dozer | 06/10/09 | Hertz | 09/10/09 |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | 09/02/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, September 11, 2009**

**Weather:**
Sunny/ Warm today 70 - 80 degrees

**Description of Work:**
Gregory Seed and Landscape on site to Hydro Seed all three area
SWMU 39 completed with one crew while second crew completed SWMU 51 and FLFA

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | 09/10/09 |
| JD 700 Dozer | 06/10/09 | Hertz | 09/10/09 |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | 09/02/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, September 14, 2009**
**to**
**Friday, September 18, 2009**

**Weather:**
Partly Cloudy/ Warm today 70 - 80 degrees

**Description of Work:**
Finalizing all decon and demobilization of equipment and vehicles from the site
Thursday pick up trucks demobilized from Radford and Friday remaining crew member demobilized
SITE WORK COMPLETED

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | 09/17/09 |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | 09/17/09 |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | 09/10/09 |
| JD 700 Dozer | 06/10/09 | Hertz | 09/10/09 |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | 09/02/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

# Appendix F

## Safety and Inspection Forms

## Daily Safety Meeting

**Project Name:** Radford SWMU 51 **Date:** 2/16/09

**Project Number:** 123461 **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_X_ safety glasses, hard hat, safety boots
_X_ site safety plan review and location
_X_ equipment and machinery familiarization
__ employee Right-To-Know/MSDS location
_X_ open pits, excavations, and site hazards
_X_ vehicle safety and driving/road conditions
_X_ portable tool safety and awareness
_X_ overhead utility locations and clearance
_X_ first aid, safety, and PPE location
__ sharp object, rebar, and scrap metal hazards
_X_ safety is everyone's responsibility
__ latex gloves inner/nitrile gloves outer
_X_ excavation/trenching inspections/documentation
__ full face respirators with proper cartridges
_X_ upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_ work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_ slips, trips, and falls
_X_ directions to hospital
__ anticipated visitors
__ electrical ground fault
_X_ public safety and fences
_X_ excavator swing and loading
_X_ orderly site and housekeeping
_X_ smoking in designated areas
_X_ leather gloves for protection
__ effects of the night before
__ vibration related injuries
_X_ fire extinguisher locations
_X_ eye wash station locations
_X_ decontamination procedures

_X_ daily work scope
_x_ emergency protocol
__ parking and laydown
_X_ hot work permits
_X_ strains and sprains
_X_ noise hazards
_X_ no horseplay
_X_ heat and cold stress
_X_ backing up hazards
_X_ accidents are costly
_X_ dust and vapor control
_X_ refueling procedures
__ confined space entry
__ flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Air monitoring will be conducted during excavation and loading operations

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Steve Kritak | Steve Kritak | Shaw |
| Stephen Banks | Stephen Banks | |
| Greg Griswold | | Shaw |
| Chester J. Bopp | Chester J. Bopp | Shaw |

# JOB SAFETY ANALYSIS

DATE: 2/16/09
JOB#: 123461
PERMIT#:
ISSUED BY: N/A

Shaw The Shaw Group Inc.

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Roadway

Wind Direction: N/A

Evacuation Route: SAME AS entry from gate 10

Assembly Point: Gate 10

Supervisor of Work: S. KRITAK

JSA Prepared By: S. Kritak

Are other crews in area NO

| | | |
|---|---|---|
| New: | ✓ | |
| Revised: | | |

**Job Task**
(What are You Doing)

Preparing Area for excavation & loadout of Trucks

**Site Cleanup**

Keep clean every day

**Potential Hazards**

Excavation Safety
Truck Traffic
Vehicle Traffic while escorting to gate

**Recommended Action or Procedure**

**Audit the Job**
Audit Time:

**Supervisors Comments**

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

Shaw The Shaw Group Inc.

S. KRITAK / S. BANKS

**SUPERVISION/FOREMAN** _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ✓ Required
- ___ Cold Work
- ___ Hot Work
- ✓ Entry Permit (ATK)
- ✓ All Conditions Met
- ✓ Signed Off When Complete
- ___ Other

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ✓ Other WATCH FOR EXPLOSIVE TRANSPORT TRUCKS

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** Feb. 17, 2009

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Begin loading trucks today Air Monitoring to begin - Escort every truck in & out.

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | S Kritak | Shaw |
| S. BANKS | Steve Banks | Shaw |
| GREG BRISWOLD | | Shaw |
| CHESTER J. BRYSON | Chester J Bryson | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL level D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: gate 10

Wind Direction:

Evacuation Route: known trk. route

Assembly Point: gate 10

Supervisor of Work: S Kritak

JSA Prepared By: S. Kritak

Are other crews in area

New: X

Revised:

**Job Task**
(What are You Doing)

loading trucks - direct load
Air monitoring - dust and OV
~~Esc~~ Escort trucks in & out of site

**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

TRAFFIC
Equip. operations
EXCAVATION safety
Cold Stress

**Supervisors Comments**

**Recommended Action or Procedure**

Follow SOP's established by CO.
Follow RADFORD RULES & ALL
TRAFFIC REGULATIONS

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ✓ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 02/25/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Continue Operations as same as last 2 weeks, Excavate, Load out and Escort to/from Gate

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S Kritak | S Kritak | Shaw |
| J Banks | J Banks | Shaw |
| Greg Griswold | | Shaw |
| Chet Bartlett Sr | Chet Bartlett Sr | SHAW |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: GATE 10

Wind Direction: —

Evacuation Route:
GATE 10 to Site

Assembly Point:
GATE 10

Supervisor of Work: S. KRITAK

JSA Prepared By: S. Kritak

Are other crews in area NO

New: X

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

EXCAVATION OF WASTE AT SWMU 51
LOAD OUT OF WASTE INTO TRUCKS
ESCORT TRUCK TO/FROM SITE TO GATE 10
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EXCAVATION SAFETY / CONFINED SPACE
SAFE EQUIPMENT OPERATIONS
TRAFFIC RULES / REGULATIONS

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SITE RULES / REGULATIONS
FOLLOW ALL SHAW SOP'S FOR
EQUIP. OPS.
EXCAVATION SAFETY

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

# JOB SAFETY ANALYSIS

Shaw The Shaw Group Inc.

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 02/26/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Continue following Safe Work Practices and all relevant RAAP & SHAW SOP's for Work.

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Kritak | S Kritak | Shaw |
| S. Banks | S Banks | Shaw |
| C. Brewer | C Brewer | Shaw |
| Greg Gatewood | Greg Gatewood | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: GATE 10
Wind Direction: N/A
Evacuation Route: Transportation Route
Assembly Point: GATE 10

Supervisor of Work: S. Kritak
JSA Prepared By: Same
Are other crews in area No

| | |
|---|---|
| New: | X |
| Revised: | |

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

EXCAVATE CONTAMINATED SOILS
ESCORT TRUCKS INTO/OUT OF SITE
TAKE POST EX. SAMPLES
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EQUIPMENT OPERATIONS
TRUCK/TRAFFIC OPERATIONS
EXCAVATION SAFETY

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SOP's AND RADFORD RULES WHILE ON SITE

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 2/27/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Continue work as we have, keep up good safe work practices & following SOP's

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | | Shaw |
| C. BETTS JR | | Shaw |
| LEE GRISWOLD | | Shaw |
| S. BANKS | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: —
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Kuttak
JSA Prepared By: Same
Are other crews in area No

| | |
|---|---|
| New: | ✓ |
| Revised: | |

**Job Task**
(What are You Doing)

ESCORT TRUCKS IN & OUT OF SITE
LOADOUT OF MATERIAL INTO TRUCKS
EXCAVATE REMAINING WASTE
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

TRAFFIC RULES / ESCORTING
EXCAVATION SAFETY / CONFINED SPACE
EQUIPMENT OPERATIONS
KEEP UP HOUSEKEEPING
CONTINUE AIR MONITORING

**Supervisors Comments**

**Recommended Action or Procedure**

JUST CONTINUE TO FOLLOW SOP's AND RADFORD RULES

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** March 3, 2009

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Xtremely Cold today, don't spend to much time outside is Wind, take frequent breaks

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | S Kritak | Shaw |
| S. BANKS | S Banks | Shaw |
| GREG GRISWOLD | | Shaw |
| C BRENNER | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route: Transport Route

Assembly Point: Gate 10

Supervisor of Work: S. Kuttak

JSA Prepared By: Same

Are other crews in area

New: X

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

Benching back excavation

**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Equipment Operations
Excavation Safety
Cold Stress
Slip Trip Fall hazards

**Supervisors Comments**

**Recommended Action or Procedure**

Take frequent breaks in truck, keep truck running and heated.
Follow SOP's for Excavation & Equipment Ops.

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 03/04/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Cold Stress, extremely cold this A.M., Keep frequent breaks to warm up

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | | Shaw |
| S. BANKS | | Shaw |
| GREG GRISWOLD | | Shaw |
| Chastain T. Bethea | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project): ~~SEA 1 WEST~~ Radford Arsenal - SWMU 51

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: S. Kizitak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: S Kizitak |
| | Wind Direction: N/A | Are other crews in area No |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: GATE 10 | New: X<br>Revised: |

**Job Task**
(What are You Doing)

Excavation of Contaminated Soils
Decon of Excavator bucket
Post Ex. Samples of excavation (taken by machine)
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Equipment Operations
Excavation Safety
Cold Stress
Slip trip Fall

**Supervisors Comments**

**Recommended Action or Procedure**

Follow All SOP's and Radford Policies
KEEP TAKING FREQUENT breaks to warm up
Watch Slippery, uneven Surfaces

**Supervisor's Initials:**

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ✓ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ✓ Ladder (~~Tied off~~ Step ladder)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ✓ Other Cold Stress

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: Stay at least 50' From Amo Magazine Bldg.

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/5/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** loading trucks today(8), escort in/out of Gate 10, loadout remaining sludge/soil mix

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | S Kritak | Shaw |
| JEFF GRISWOLD | | Shaw |
| STEPHEN BANKS | Stephen Banks | Shaw |
| Chester Brush | Chester Brush | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Keitah
JSA Prepared By: Same
Are other crews in area NO

| | | |
|---|---|---|
| New: | X | |
| Revised: | | |

**Job Task**
(What are You Doing)

Escort trucks in and out Gate 10
Load trucks at SWMU 51
Clean up ~~Site~~ Excavator
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Equip Operations
Excavation Safety
Traffic Rules

**Supervisors Comments**

**Recommended Action or Procedure**

Follow all SOP's for Excavation and Equipment Operations

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | [signatures] | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: 3/5/09
JOB#: 123461
PERMIT#:
ISSUED BY: [illegible]

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/6/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Clean up site, clean up roadway, prepare to secure for weekend.

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | SKritak | Shaw |
| J. BATES | J Bates | SHAW |
| GREG GREENWOOD | | Shaw |
| Chester J. Benson | Chester J Benson | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: follow Transport route
Assembly Point:
Gate 10

Supervisor of Work: S. Kozitak
JSA Prepared By: Same
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Roadway Cleanup
**Site Cleanup**
Secure for Wkend.

**Audit the Job**
Audit Time:

**Potential Hazards**

Truck traffic on roadway
Equipment Operations
Slip Trip Fall

**Supervisors Comments**

**Recommended Action or Procedure**

Follow Safe Work Practices

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/9/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** loading remaining 6 loads of waste

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | SKritak | Shaw |
| JEL GRISWOLD | JT Griswold | Shaw |
| STEPHEN BANKS | Stephen Banks | Shaw |
| CHESTER J. BAILEY | Chester J Bailey | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: SKRITAK
JSA Prepared By: Same
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Escort Trucks in/out SITE
Loadout Waste/Equip. Ops.
Traffic Safety
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip Trip Fall
Traffic
Equipment Operation Safety
Excavation Safety

**Supervisors Comments**

**Recommended Action or Procedure**

Follow all SOP's for Excavation
Follow Radford Rules / Escort drivers
Not lighters / matches or open flames

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/10/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Clean up Excavator, Take remaining Post Excavation samples and secure site

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Kritak | S Kritak | Shaw |
| Stephen Banks | Stephen Banks | Shaw |
| Greg Gerrard | Greg Gerrard | Shaw |
| Chester J. Bednar | Chester J. Bednar | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: 3/10/09
JOB#: 123461
PERMIT#:
ISSUED BY: N/A

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Kritac
JSA Prepared By: SKritac
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Clean up Excavation Area
Pull last Ex. Samples
Ship Samples to Lab
Site Cleanup

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip Trip Fall
Equipment Ops.

**Supervisors Comments**

**Recommended Action or Procedure**

Follow SOPs during work activities.

**Supervisor's Initials:**

| Crew Name Signatures: | |
|---|---|
| JSA Completed at Tailgate Safety Meeting | |

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** March 16, 17, 18, 19 & 20, 2009 WEEKLY TAILGATE (Reviewed daily)

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Site Clean up and Prep for loading additional 6 trucks on the 20th Also prep being done to start SWMU 39 3/24/09

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Bowers | Stephen Bowers | Shaw |
| Chester J. Bowser | Chester J. Bowser | Shaw |
| Greg Griswold | Greg Griswold | Shaw |
| | | |
| | | |

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# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. ICRIMAL
JSA Prepared By: SAME
Are other crews in area No

| | |
|---|---|
| New: | X |
| Revised: | |

**Job Task**
(What are You Doing)

Prep for Additional Excavating / Loading
Prep for SWMU 39 (Clearing / Grubbing)
Escort / Route Procedures
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EQUIP operations
Chain Saw Safety Reviewed
TRAFFIC / Explosive hauling Vehicles

**Supervisors Comments**

**Recommended Action or Procedure**

Follow all SOP's and EFMAP Rules

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

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# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- ___
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** March 30, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Cutting of trees and chipping operations, equipment operations moving trees and branches

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| R. Trahan | | Shaw |
| R. Lacson | | SHAW |
| R. McBride | | SHAW |
| | | |
| | | |

Instructions: Conduct a daily safety meeting prior to beginning each day's site activities. Complete form, obtain signatures, and file with the Daily Summary. Follow-up on any noted items and document resolution of any action items.

TASK TITLE: PERFORMED BY:

| PRINT NAME | SIGNATURE | DATE |
|---|---|---|
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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: |
|---|---|---|
| LEVEL | Safe Haven: | JSA Prepared By: |
| | Wind Direction: | Are other crews in area |
| Pre-Job Preparation | Evacuation Route: | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: | New: / Revised: |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Site Cleanup** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** March 31, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Cutting of trees and chipping operations, equipment operations moving trees and branches

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Brooks | | Shaw |
| Chester J Brewer | | Shaw |
| Greg Griswold | | Shaw |
| [illegible] | | Shaw |
| R. Lacson | | Shaw |
| Randy McBride | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Transport Route

Assembly Point:
Gate 10

Supervisor of Work: S. KRITAK

JSA Prepared By: S. KRITAK

Are other crews in area

New: ✓

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

Cutting Trees down in Ponds
Trimming branches
Chipping branches & small stumps

**Site Cleanup**

Transpart trees & branches using BOBCAT and Loader

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip Trip Fall
Chain Saw Safety
Chipper Safety
Equipment Operations

**Supervisors Comments**

**Recommended Action or Procedure**

Follow SOP's and PFMAP Policies

Notify Control Room whenever entering (A.M.) and Leaving (P.M.)

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other Chaps

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- N/A Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other

**HAZARDS/CHEMICALS**
- N/A Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- N/A Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- N/A Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 2, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Cutting of trees and chipping operations, equipment operations moving trees and branches

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| RIVRAHAN | | SHAW |
| R. Lacson | | Shaw |
| Randy McBroom | | SHAW |
| Chester J. Branch | | SHAW |
| Stephen Banks | | SHAW |
| Glee Ekiwood | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Cutting trees and dragging to prep area | |
| Removing branches and cutting trunks into 8' sections | |
| Placing trunks into wooded area using bobcat | |
| Chipping branches and sections of trees under 12" | |
| Site clean up | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall | |
| Equipment Operations-Loader and skid steer | |
| Chain Saw Operations | |
| Chipper Operations | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment | |
| Follow all RFAAP safety rules | |
| Follow all Shaw SOP's | |

| Crew Name Signatures: | R. Tolar<br>R. Lacson | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51** /SWMU 39 **Date:** April 6, 2009

**Project Number: 123461** _____ **Presented by:** Steve Kritak _____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet. BACKFILL OF AREA 51 W/ ON SITE SPOILS CONTINUE CHIPPING & CLEARING AT AREA 39

**Discussion/Comments/Follow-up Actions:** CONTINUE WORKING AS A TEAM AND FOLLOW ALL SOP's & RADFORD REGULATIONS

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| CHRIS GRISWOLD | | Shaw |
| STEPHEN BANKS | | Shaw |
| K. TRAHAN | | Shaw |
| K. LACSON | | Shaw |
| CHESTER J. BRUNIN | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: GATE 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: GATE 10

Supervisor of Work: S. KRITSAK
JSA Prepared By: SAME
Are other crews in area: No

New: X
Revised:

**Job Task**
(What are You Doing)

BACKFILL SWMU 51 WITH SEGREGATED SPOILS MATERIAL
COMPACT MATERIAL W/ BUCKET OF CAT 330

**Site Cleanup**

CONTINUE MOVING TREES TO CHIPPING AREA FROM PONDS
STRIP BRANCHES AND PUT THROUGH CHIPPER
SPREAD TRUNKS AND MULCH IN WOODED AREAS

**Potential Hazards**

EQUIPMENT OPERATIONS
SHARP / CUTTING HAZARDS
SLIP TRIP FALL ; UNEVEN SURFACES
HEAVY LIFTING

**Recommended Action or Procedure**

FOLLOW ALL SHAW SOP'S
FOLLOW ALL RADFORD POLICY ; PROCEDURES

**Audit the Job**
Audit Time:

**Supervisors Comments**

**Supervisor's Initials:**

**Crew Name Signatures:**

JSA Completed at Tailgate Safety Meeting

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work SUMUSI
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51 & 39** **Date:** April 7, 2009

**Project Number: 123461** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** BACKFILL AT SWMU 51 to only 15' bgs. ~~Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.~~ SWMU 39 prepare for Excavation of Ponds and loading into trucks. Prepare ramp into 1st Pond.

**Discussion/Comments/Follow-up Actions:** Extremely windy/cold today watch for slip trip fall hazards and check in w/control room prior to entry into SWMU 39

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| STEPHEN BANKS | Stephen Banks | Shaw |
| Chester J Barnes | Chester J Barnes | Shaw |
| Greg Grigsby | Greg Grigsby | Shaw |
| R Tatum | R Tatum | Shaw |
| R Lacson | R Lacson | shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: 4/7/09
JOB#:
PERMIT#: 123461
ISSUED BY:

**Location of Job** RFAAP - SWMU 39 and SWMU 51
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Kratak
JSA Prepared By: Same
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Prepare entry ramp into SWMU 39 pond A
BACKFILL AT SWMU 51 (10 15' lifts)
Compact at SWMU 51 w/ bucket (only)

**Site Cleanup**

* Work out details of Excavating windrows at ponds.

**Potential Hazards**

Equipment operations
Excavation Safety
Traffic through Plant (Right of way to Explosive Trucks and escorted Vehicles)
Slip Trip Fall
Cold Stress

**Recommended Action or Procedure**

Follow Standard Shaw SOP's
Follow RFAAP Safety Policies

**Audit the Job**
Audit Time:

**Supervisors Comments**

**Supervisor's Initials:**

| Crew Name Signatures: | |
|---|---|
| JSA Completed at Tailgate Safety Meeting | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ✓ Hot Work (Sum 39)
- ✓ Entry Permit (both 51 & 39)
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- ___
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

### Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51 & 39** **Date:**

**Project Number: 123461** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** [redacted]

No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives a[redacted]

[redacted] Excavation at SWMU 39 of Lead Contaminated Soils. Finish removal of fence posts and breaking of Concrete.

**Discussion/Comments/Follow-up Actions:** Check in with Control Room prior to entry into the Incinerator Area

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brinson | | SHAW |
| Stephen Banks | | SHAW |
| Greg Griswold | | SHAW |
| Jeff Hillebrand | | SHAW |
| Randy McBride | | SHAW |
| R. Trahan | | SHAW |
| R. Laesen | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: GATE 10

Supervisor of Work: S. KRITAIC
JSA Prepared By: Same
Are other crews in area None

New: X
Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

EXCAVATE LEAD SOILS TO 1 FOOT BGS
STOCKPILE SOILS IN "ROWS" NOT PILES
SAMPLE/TEST SUBGRADE W/ XRF
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EQUIPMENT OPERATIONS
SLIP TRIP, FALL
HEAVY LIFTING
EXCAVATION SAFETY
OBEY TRAFFIC REGULATIONS ON BASE

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SHAW SOP's
FOLLOW RFAAP RULES & REGULATIONS.

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- X Heavy Objects
- X Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- X Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 9, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures

_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| K. Trahan | K. Trahan | Shaw |
| R. Lacson | R. L | Shaw |
| Chester J. Brinson | Chester J. Brinson | SHAW |
| Randy McMinor | | SHAW |
| Jeff Hilkbrand | | SHAW |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 13, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Benson | | SHAW |
| Raddy Lawson | | Shaw |
| Jeff Hilkbrand | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** April 15, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| R Larson | | Shaw |
| J. Hiltbrand | | Shaw |
| C. Brinser | | Shaw |
| Gene Gerwood | | Shaw |
| | | |

IL0001357236

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
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- X Extension Cord Inspection
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**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 16, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks | | Shaw |
| Stephen Hillebrand | | Shaw |
| Chester Brinson | | Shaw |
| R. Lacson | | Shaw |
| Eric Griswold | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 17, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Charles J. Branson | | Shaw |
| Greg Gibbons | | Shaw |
| R. Larson | | Shaw |
| Steve Barker | | Shaw |
| Jeff Nellenbach | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 20, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| R Lacson | | Shaw |
| C. Brown | | Shaw |
| S. Banks | | Shaw |
| Greg Griswold | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 21, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. BANKS | | Shaw |
| Greg Gasswood | | Shaw |
| R Lacson | | shaw |
| C. BOINSER | | SHAW |
| J. Nillebrand | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** 4/22/09

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Branson | | Shaw |
| S. Banks | | Shaw |
| Otis Grimsley | | Shaw |
| R. Lacson | | Shaw |
| J. Hildebrand | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br><br>LEVEL | **Safety Access/ Location**<br><br>Safe Haven: Gate 10<br><br>Wind Direction: N/A<br><br>Evacuation Route:<br>Follow Transport Route<br><br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br><br>JSA Prepared By: Same<br><br>Are other crews in area RFAAP Production crews<br><br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br><br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | |
|---|---|
| **JSA Completed at Tailgate Safety Meeting** | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 23, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. BANKS | | SHAW |
| C. BRINSON | | SHAW |
| J. Hilkbrand | | Shaw |
| R Lacson | | Shaw |
| Steve Griswold | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** 4/24/09

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. Brinson | | Shaw |
| R. Lacson | | Shaw |
| B. Griswold | | Shaw |
| S. Banks | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 27, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| J. Hilliard | | Shaw |
| C. Brinson | | Shaw |
| R. Lacson | | Shaw |
| G. Griswold | | Shaw |
| S. Banks | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 28, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. Brinson | | Shaw |
| S. Banks | | Shaw |
| R. Lacson | | Shaw |
| G. Growald | | Shaw |
| J. Hillebrand | | Shaw |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** 4/29/09

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. Branson | | SHAW |
| J. Hilebrand | | Shaw |
| J. Banks | | SHAW |
| R. Larson | | shaw |
| G. Gearwood | | Shaw |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** May 5, 2009

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:**_____

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks<br>Chester J. Banks | Stephen Banks<br>Chester J. Banks | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 51

Required PPE:

LEVEL D

**Pre-Job Preparation**

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: GATE 10
Wind Direction: N/A
Evacuation Route: follow Transport Route
Assembly Point: GATE 10

Supervisor of Work: S. Krifka
JSA Prepared By: S Krifka
Are other crews in area NO

New: X
Revised:

**Job Task**
(What are You Doing)

ESCORT TRUCKS INTO S/TE
LOAD 2 TRUCKS
ESCORT OUT OF SITE

**Site Cleanup**

SAMPLE SOIL - SWMU 51

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip, Trip, Fall
TRAFFIC SAFETY
EQUIPMENT OPERATIONS

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SHAW SOP's & RADFORD POLICIES

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal**____ **Date:** May 11, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Britton | | Shaw |
| Stephen Brooks | | Shaw |
| Greg Gelwood | | Shaw |
| Jeff Hilliard | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: May 11, 2009
JOB#: 123461
PERMIT#: N/A
ISSUED BY: S. Kritak

| | | |
|---|---|---|
| **Location of Job** (Unit/Location on Project): ~~SEAD WEST~~ SWMU 39 - RFAAP | | |
| Required PPE: LEVEL | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
| | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal**___ **Date:** May 13, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Brooks | | Shaw |
| C. Brinser | | Shaw |
| Greg Greenwood | | Shaw |
| J. Hilkbrand | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~SITE WEST~~ SWMU 39

| | | |
|---|---|---|
| Required PPE:<br>LEVEL D | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
| | Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** May 15, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Bayis | | SHaw |
| J. Hillebran | | Shaw |
| C. Bryson | | Shaw |
| Greg Gilliwood | | Shaw. |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

| | | |
|---|---|---|
| **Location of Job** (Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39 | | |
| Required PPE:<br>LEVEL D | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
| | Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews<br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task** (What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** May 18, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| G. Bertasso | | Shaw |
| Stephan Banks | | Shaw |
| Greg Grinnup | | Shaw |
| Jeff Hilbrand | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal**___ **Date:** May 19, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Banks | | Shaw |
| C. Brinser | | Shaw |
| Bill Griswold | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** May 20, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. BRINSON | | Shaw |
| S. Banks | | Shaw |
| Greg Gregory | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br><br>LEVEL | **Safety Access/ Location**<br><br>Safe Haven: Gate 10<br><br>Wind Direction: N/A<br><br>Evacuation Route:<br>Follow Transport Route<br><br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br><br>JSA Prepared By: Same<br><br>Are other crews in area RFAAP Production crews<br><br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br><br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| | | |
|---|---|---|
| **Crew Name Signatures:** | | |
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 1 & 2, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banics | | Shaw |
| | | Shaw |
| Bob Griswold | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br>LEVEL | **Safety Access/ Location**<br>Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route:<br>Follow Transport Route<br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br>JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews<br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** June 3, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 51/39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chet Brinser | | Shaw |
| Stephen Banks | | Shaw |
| Bob Gerwood | | Shaw |
| Jeff Hillebrand | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 29, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Jeff Hibbard | | Shaw |
| S. Banks | | Shaw |
| C Gilsworth | | Shaw |
| C. Brinser | Chet Brinser | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 4, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 5 ~~39~~, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| CHET BETTSER | | Shaw |
| Stephen Banks | | Shaw |
| Greg Gremwood | | Shaw |
| Jeff Nelson | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br>LEVEL | **Safety Access/ Location**<br>Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route:<br>Follow Transport Route<br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br>JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews<br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal** **Date:** June 8, 2009

**Project Number: 123461.** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Excavation and load out of non hazardous soils from the Former Lead Furnace Area for shipment to the landfill. Sampling of soils and analysis using XRF and regrading of area when completed.

**Discussion/Comments/Follow-up Actions:** Follow all RFAAP safety protocols trucks will be weighed at scales behind shipping and receiving by Shaw.

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| CHET BRINSON | | Shaw |
| CRAIG GRISWOLD | | Shaw |
| Jeff Hilderbrand | | Shaw |
| STEPHEN BANKS | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):FLFA

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of Soils at FLFA** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Regrading of areas when completed** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 11, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | |
| Stephen Banks | | |
| Greg Gatewood | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | |
|---|---|
| New: | XXXX |
| Revised: | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** 6/12/09

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | Shaw |
| Greg Bridgewood | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 22, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brinson | | Shaw |
| Gene Garwood | | Shaw |
| | | |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Excavation of sediment ponds | |
| Stockpiling of material | |
| Sampling of soils using XRF | |
| Backfill and compaction of ponds | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall | |
| Equipment Operations-Loader and Excavator | |
| Traffic during Escorting of disposal trucks | |
| Heavy lifting | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment | |
| Follow all RFAAP safety rules | |
| Follow all Shaw SOP's | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** June 23, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Christopher J. Bellasai | | Shaw |
| Greg Gregorio | | Shaw |
| | | |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

| **Location of Job** (Unit/Location on Project):STA 1 WEST | | |
|---|---|---|
| Required PPE:<br><br>LEVEL | **Safety Access/ Location**<br><br>Safe Haven: Gate 10<br><br>Wind Direction: N/A<br><br>Evacuation Route: Follow Transport Route<br><br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br><br>JSA Prepared By: Same<br><br>Are other crews in area RFAAP Production crews<br><br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br><br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task** (What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds**<br>**Stockpiling of material**<br>**Sampling of soils using XRF**<br>**Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall**<br>**Equipment Operations-Loader and Excavator**<br>**Traffic during Escorting of disposal trucks**<br>**Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment**<br>**Follow all RFAAP safety rules**<br>**Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 24, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester S. Bryson | | Shaw |
| J. Wilson | | Shaw |
| S. Banks | | Shaw |
| Greg Bryson | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** June 30, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Jeff Hildebrand | | Shaw |
| Chester S. Bottser | | Shaw |
| S. Banks | | Shaw |
| Greg Gaylord | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39 (BACKFILL)

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 2, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Greg Gerwood | | Shaw |
| S. Banks | | Shaw |
| Chet Bretsch | | Shaw |
| Jeff Nilsbrand | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
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- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** July 7, 2009

**Project Number: 123461.24000002** _____ **Presented by:** Steve Kritak _____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** _____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Bruns | | Shaw |
| Greg Bridgewood | | Shaw |
| Stephen Burke | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** July 9, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** and traffic regulations.

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Bronson | | Shaw |
| Stephen Bandis | | Shaw |
| Bud Brown | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 13, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Gale Gatewood | | Shaw |
| Chester Jefferson | | Shaw |
| Stephen Bradley | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 21, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewster | | Shaw |
| Greg Greenwood | | Shaw |
| Stephen Brady | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate | | |
| Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** July 22, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewer | | Shaw |
| Greg Gaskamp | | Shaw |
| S. Banks | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 23, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~29~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewer | | Shaw |
| Greg Gatewood | | Shaw |
| S. Banks | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 24, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL >10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Beaver | | Shaw |
| Greg Gragwood | | Shaw |
| S. Banks | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 29, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of ~~lead~~ contaminated soils ~~impounds~~ located at SWMU 51 ~~29~~, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete** BACKFILL ONLY

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Benson | | Shaw |
| Greg Greenwood | | Shaw |
| Steven Banks | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** 7-15-09

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewer | | S |
| Stephen Jones | | S |
| Greg Brewer | | S |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Excavation of sediment ponds<br>Stockpiling of material<br>Sampling of soils using XRF<br>Backfill and compaction of ponds | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall<br>Equipment Operations-Loader and Excavator<br>Traffic during Escorting of disposal trucks<br>Heavy lifting | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment<br>Follow all RFAAP safety rules<br>Follow all Shaw SOP's | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** July 1, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Jeff Hilliard | | Shaw |
| J. Burton | | Shaw |
| C. Ellsworth | | Shaw |
| C. Brewster | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 26, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | Shaw |
| Stephen Banks | | Shaw |
| Jeff Hilliard | | Shaw |
| Greg Griswold | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** May 21, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| L. Brinson | | Shaw |
| S. Banks | | Shaw |
| Greg Griswold | | Shaw |
| | | |
| | | |

982

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** July 28, 2009

**Project Number: 123461.~~24000002~~** 62000002 ___ **Presented by:** Steve Kritak ___

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL >10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~38~~, loading material into trucks for disposal, backfill and compaction of ~~pond~~s after confirmatory sampling is complete**

EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** ___

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Bayes | | Shaw |
| J. Alleman-J | | Shaw |
| Greg Griswold | | Shaw |
| Cheri Brunser | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

989

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** July 27, 2009

**Project Number: 123461.~~24000002~~ 62000002** ___ **Presented by:** Steve Kritak ___

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**

EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** ___

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks | | Shaw |
| J. Hellebrand | | Shaw |
| Gene Gregwood | | Shaw |
| Chet Brinser | | Shaw |
| | | |

007

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** Aug. 17, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | SHAW |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** Aug. 18, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Benser | | Shaw |
| Steven Banks | | Shaw |
| | | |
| | | |
| | | |

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

Shaw Group Inc.

**ion of Job**
(Location on Project):STA 1 WEST

quired PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | |
|---|---|
| New: | XXXX |
| Revised: | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate | | |
| Safety Meeting | | |

# AFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

_____ _____

ı apply to the job, then review with the work crew.

**(PPE)**

_____ X Type of Gloves
_____ X Composition of Gloves
_____ Special Purpose Gloves
_____ Tyvek Suit
_____ Acid Suit /Slicker Suit
_____ Rubber Boots
_____ Mono Goggles (vented/non-vented)
_____ X Face Shield
_____ Respirator
_____ Fresh Air
_____ X Ear Protection
_____ Safety Harness
_____ Burning Goggles
_____ X Other _____

**TOOLS**

_____ X Current Inspection
_____ X Proper Tools for the Job
_____ X Good Tool Condition
_____ X Qualifications
_____ Other _____

**EMERGENCY EQUIPMENT**

_____ X Fire Extinguishers
_____ Safety Shower
_____ X Evacuation Route
_____ Other _____

**ACCESS**

_____ Scaffold (properly inspected)
_____ Ladder (Tied off)
_____ Manlift
_____ Personnel Basket (inspected & approved)
_____ Operator Training
_____ Special Provisions
_____ Other

**WELDING**

_____ Flashburns
_____ Combustibles
_____ Spark Containment
_____ Shields
_____ Grounding
_____ Water Hose
_____ Fire Extinguisher
_____ Fire Blanket
_____ Fire Watch
_____ Sewer Covers
_____ Other _____

**OVERHEAD WORK**

_____ X Barricades
_____ Signs
_____ Hole Cover
_____ Handrail
_____ Other _____

**ELECTRICAL**

_____ Locked & Tagged out
_____ Try Start/Stop Switch
_____ X GFCI Test
_____ X Assured Grounding
_____ X Extension Cord Inspection
_____ Other _____

**LIFTING**

_____ Forklift
_____ Cherry Picker
_____ Load Chart
_____ Angle
_____ Crane
_____ Chainfall
_____ X Proper Rigging Practices
_____ X Manual Lifting
_____ X Condition of Equipment
_____ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**

_____ Electrical Shock
_____ Heat Stress
_____ Heavy Objects
_____ Hot/Cold Surf. Or Mat.
_____ Inadequate Lighting
_____ Line Breaking
_____ X Noise
_____ Poor Access/Egress
_____ Sharp Objects
_____ Other _____

**HAZARDS/CHEMICALS**

_____ Chemical Burn Shin/Eyes
_____ Flammable
_____ Ingestion
_____ Inhalation
_____ Skin Contamination

**HAZARDS/BODY**

_____ Fall Potential
_____ Pinch Points
_____ Slip-Trip Potential
_____ Other _____

**OTHER WORK IN AREA**

_____ Others Working Overhead
_____ Type Work Others Doing
_____ PPE Due to Other Work
_____ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** Aug. 19, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Bethusen | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** Aug. 20, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Christopher J. Bowser | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** August 24, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils [redacted] located at [redacted] FLFA loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Barns | | Shaw |
| Chester J. Brinsen | | Shaw |
| Steven Kritak | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

| | | | |
|---|---|---|---|
| **Location of Job** (Unit/Location on Project): ~~[illegible]~~ FLFA | | | |
| Required PPE: LEVEL D | **Safety Access/ Location** | Supervisor of Work: Steve Kritak | |
| | Safe Haven: Gate 10 | JSA Prepared By: Same | |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews | |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | Revised: | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** August 25, 2009

**Project Number: 123461.24000002** ___ **Presented by:** Steve Kritak ___

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures

_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils [redacted] located at [redacted] FLFA; loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** ___

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks | | Shaw |
| Chester J. Brinser | | Shaw |
| Steven Kritak | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~[redacted]~~ FLFA

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Excavation of sediment ponds | |
| Stockpiling of material | |
| Sampling of soils using XRF | |
| Backfill and compaction of ponds | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall | |
| Equipment Operations-Loader and Excavator | |
| Traffic during Escorting of disposal trucks | |
| Heavy lifting | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment | |
| Follow all RFAAP safety rules | |
| Follow all Shaw SOP's | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** Aug. 31, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 2/18/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Rainy weather, slippery surfaces, Truck traffic & Equipment Operations

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | Skritak | Shaw |
| S. BANKS | Steve Banks | Shaw |
| CHET BRAPSON | Chet Brapson | Shaw |
| GREG GRISWOLD | Greg Griswold | Shaw |
| | | |



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

| | | | |
|---|---|---|---|
| UNIT NO: | 100600 | WEEK ENDING: | 1/9/09 |
| UNIT MILES: | 97151 | CURRENT JOB NO: | 123461 |
| INSPECTED BY: | S KRITAR | FUEL FRONT: | — |
| EMP. NUMBER: | 438449 | FUEL REAR: | — |

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | N | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | — | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: Unit is stained on floor boards and dash.
LOUD RATTLE FROM Exhaust system occurs frequently.
Exterior O.K.

INSPECTORS SIGNATURE: Steve Kritar  DATE: 1/9/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

| | | | |
|---|---|---|---|
| UNIT NO: | 101069 | WEEK ENDING: | 1/9/09 |
| UNIT MILES: | 46800 | CURRENT JOB NO: | 23461 |
| INSPECTED BY: | S. KRITAK | FUEL FRONT: | — |
| EMP. NUMBER: | 438449 | FUEL REAR: | — |

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | N | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | — | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: Small dent on right side rear chrome bumper

INSPECTORS SIGNATURE: Sturm Kritak  DATE: 1/9/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 46950
INSPECTED BY: S. KRITAL
EMP. NUMBER: 438449

WEEK ENDING: 1/19/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

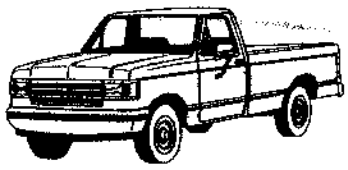
N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| | Unit Fueled Yes / No | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

WAS UNIT SERVICED Y (N)  DATE  MILES

COMMENTS: No Problems

INSPECTORS SIGNATURE: Steve Krital  DATE: 1/19/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 100600
UNIT MILES: 97720
INSPECTED BY: S. KRITIKL
EMP. NUMBER: 438449

WEEK ENDING: 1/19/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. **Yes / No** | O | Transmission Oil & Drive Line |
| | Unit Fueled **Yes / No** | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer-Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| N | | |

COMMENTS: No Problems

INSPECTORS SIGNATURE: Steven Kritikl  DATE: 1/19/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 10/069
UNIT MILES: 47647 2.23.09
INSPECTED BY: S Bates
EMP. NUMBER: 743826

WEEK ENDING: 2-20-09
CURRENT JOB NO:
FUEL FRONT: 7 1/2
FUEL REAR: N/A

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| 7 1/2 | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | N | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

**WAS UNIT SERVICED (Y) N** **DATE** **MILES**

COMMENTS:

(1) Small Hole in Muffler

(2) Small crack windshield

**INSPECTORS SIGNATURE:** [signature] **DATE:** 2-23-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 100600
UNIT MILES: 99096
INSPECTED BY: SCRITAK
EMP. NUMBER: 438449

WEEK ENDING: 2/20/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| | Unit Fueled Yes / No | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer-Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

INSPECTORS SIGNATURE: [signature] DATE: 2/20/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 1006010
UNIT MILES: 98440
INSPECTED BY: S. KREMAK
EMP. NUMBER: 438449

WEEK ENDING: 2/20/09
CURRENT JOB NO: 123461
FUEL FRONT: 1/
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler RATTLES |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers See note | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | N/A | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: Windshield has crack across bottom occurred over weekend while truck was parked

INSPECTORS SIGNATURE: S Kmtak  DATE: 2/16/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 97244
INSPECTED BY: S BANKS
EMP. NUMBER: 43 8326

WEEK ENDING: 2/20/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

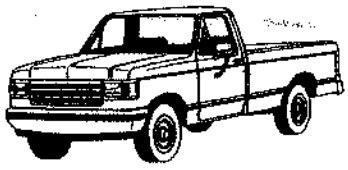
**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| 1/4 | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | N | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

**WAS UNIT SERVICED (Y) / N** **DATE** **MILES**

COMMENTS:
VEHICLE WAS JUST SERVICED ON 2-12-09
(N) SMALL CRACK IN WIND SHIELD
(N) SMALL HOLE IN EXHAUST PIPE

**INSPECTORS SIGNATURE:** S Banks **DATE:** 2-16-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 48024
INSPECTED BY: Chris Stinson
EMP. NUMBER: 1193219

WEEK ENDING: 3-6-09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR: X

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. **Yes / No** | O | Transmission Oil & Drive Line |
| O | Unit Fueled **Yes / No** | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:
CRACK IN WINDSHIELD
NEED A NEW ONE

INSPECTORS SIGNATURE: [signature]  DATE: 3-5-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 100600
UNIT MILES: 995888
INSPECTED BY: S Kvitek
EMP. NUMBER: 438449

WEEK ENDING: 3/06/09
CURRENT JOB NO: 123461
FUEL FRONT: \
FUEL REAR: \

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE **C** = COMMENTS **O** = OKAY **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| | Unit Fueled Yes / No | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

WAS UNIT SERVICED Y / (N) DATE MILES

COMMENTS: Scheduled for service early next week.

INSPECTORS SIGNATURE: S Kvitek DATE: 3/3/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101 & 09
UNIT MILES: 49257
INSPECTED BY: [illegible]
EMP. NUMBER: 147229

WEEK ENDING: 3-10-09
CURRENT JOB NO: _____
FUEL FRONT: _____
FUEL REAR: _____

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | C | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | C | Radiator / Cooling System |
| C | Air Conditioner / Heater | C | Exhaust / Muffler |
| C | Battery / Starter / Horn | O | Front Axle / Steering |
| C | Lights, Head-Tail-Turn-Stop-Emer. | C | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| C | Service Brakes | O | Tires / Wheels / Rims |
| C | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| C | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: crack in windshield
hole in muffler

INSPECTORS SIGNATURE: [signature] DATE: 3-10-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 10169
UNIT MILES: 148414
INSPECTED BY: Grimwood
EMP. NUMBER: 119206

WEEK ENDING: 3-13-07
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: Crack in windshield.
Hole in muffler.

INSPECTORS SIGNATURE: [signature] DATE: 3-13-07



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 49960
INSPECTED BY: [illegible]
EMP. NUMBER: 1192206

WEEK ENDING: 3-24-09
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

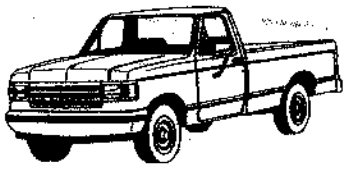
**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: CRACK IN WINDSHIELD
HOLE IN MUFFLER

INSPECTORS SIGNATURE: [signature]  DATE: 4-24-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101669
UNIT MILES: 48913
INSPECTED BY: Eric Grossard
EMP. NUMBER: 1122609

WEEK ENDING: 3-27-09
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | C | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: crack in windshield lr side.
hole in muffler.

INSPECTORS SIGNATURE: [signature]  DATE: 3-27-09.

Col 330 49850

101669 48950

101495 100600



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 50,452
INSPECTED BY: C. Brown
EMP. NUMBER: 1176271

WEEK ENDING: 5/8/09
CURRENT JOB NO:
FUEL FRONT: Full
FUEL REAR: NONE

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled (Yes / No) | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

INSPECTORS SIGNATURE: Chas A J Brown  DATE: 5/8/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 131069
UNIT MILES: 50865
INSPECTED BY: Grimsrud
EMP. NUMBER: 119261

WEEK ENDING: 5-22-09
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | N/A | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: CRACK IN WINDSHIELD.
HOLE IN MUFFLER.

INSPECTORS SIGNATURE: [signature] DATE: 5-22-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 50332
INSPECTED BY: C. Bowser
EMP. NUMBER: 11765971

WEEK ENDING: 5/15/09
CURRENT JOB NO:
FUEL FRONT: 1/2 Tank
FUEL REAR: None

*For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483*

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | Yes / No | | |
|---|---|---|---|---|
| O | Unit Washed, Interior Cleaned. | (Yes) / No | O | Transmission Oil & Drive Line |
| N | Unit Fueled | | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | | O | Suspension System |
| O | Ins. Card & Accident Report Kit | | O | Spare Tire |
| O | Current Registration, Plates | | O | Jack & Lug Wrench |
| O | Service Brakes | | O | Tires / Wheels / Rims |
| O | Parking Brakes | | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | | O | Coupling Devices |
| O | Mirrors-Inside-Outside | | O | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

Fueled 5/13/09

INSPECTORS SIGNATURE: Chuck Bowser  DATE: 5/15/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 57591
INSPECTED BY: C. Beaver
EMP. NUMBER: 176271

WEEK ENDING: 6/13/09
CURRENT JOB NO:
FUEL FRONT: Full
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. (Yes / No) | O | Transmission Oil & Drive Line |
| O | Unit Fueled | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

Yes / No

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

INSPECTORS SIGNATURE: Chet Beaver  DATE: 6/12/09

EQUIP. NO. 55674

EQUIP. TYPE CAT 330

ENDING HRS. 4850



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***



WEEK ENDING 1/19/09

SUPERVISOR KRITAK

LOCATION Radford, Va.

| SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|
| | | O | O | O | O | O |

A=ADD O=OKAY C=COMMENTS

ITEM

1 Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc.
2 Check Hydraulic Oil Level, Inspect The Cap And Vent.
3 Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc.
4 Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators)
5 Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only)
6 Check For Leaks Of Any Kind, I.E., Oil Or Coolant.
7 Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc.
8 Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc.
9 Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc.
10 Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc.
11 Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc.
12 Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge.
Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items.
Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks.
13 Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas.
Check Grab Handles And Step Treads, Etc.
14 Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc.
15 Look Under The Machine For Any Loose Or Hanging Objects, Leaks
Or Anything Out Of The Ordinary.
16 Check Fuel Level, Fill Tank Prior To Beginning Operations.
17 **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links,**
**Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease**
**Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.**
18 Check Breathing Air System ( If Used ) Make Sure Bottle Is Full
And Mask / Hose Assembly Is Clean And In Good Working Condition.
19 **Ensure The Presence Of The Operations / Maintenance Manual.**

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

Please report any items in need of immediate attention.

**COMMENTS:** Please use line number and be specific. No Problems, machine only RUN 10 hrs for entire week

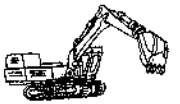
**Signature:** Steve Kritak **Employee Number:** 438449

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 240-10

EQUIP. TYPE JD 200

ENDING HRS. 2376



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 4/3/09

SUPERVISOR S. KRITAK

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | | O | O | O | O |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | | C | C | C | C |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | | C | C | C | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | | O | O | O | O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | | | | | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | | | | | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

NO. 11 - WINDSHIELD WIPER DOESN'T WORK

NO. 12 - VERY DIRTY

Employee Number: 176271

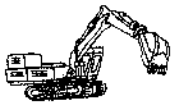
Signature: Chad Brown

*THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.*

EQUIP. NO. 55674

EQUIP. TYPE 330 HOE

ENDING HRS. 4925



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 4/10/09

SUPERVISOR S. KRITAK

LOCATION RADFORD VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | | O | | | |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | | O | | | |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | | O | | | |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | | O | | | |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | | O | | | |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | | O | | | |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | | O | | | |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | | O | | | |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | | O | | | |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | | O | | | |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | | O | | | |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | | O | | | |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | | O | | | |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | | O | | | |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | | O | | | |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | | | | | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | | | | | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

**Employee Number:** 117627

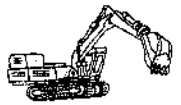
**Signature:**

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE TRACK HOE

ENDING HRS. 4960





Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

WEEK ENDING 4/24/09

SUPERVISOR S. KERTOSH

LOCATION RADFORD VA

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | N/A | N/A | N/A | N/A | N/A |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | O | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | O |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O<br>O | O<br>O | O<br>O | O<br>O | O<br>O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | N/A |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | O | O |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | O | O | O | O | O |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

**Employee Number:**

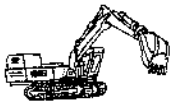
**Signature:**

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE TRACK HOE

ENDING HRS. 4970



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/1/09

SUPERVISOR S Keitsch

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | | |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | | |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | | |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | | |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | N/A | N/A | N/A | N/A | N/A |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | | |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | | |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | | |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | | |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | | |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | | |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | | |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | | |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | | |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | A | O | O | | |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

Monday/ grease Machine Line 17

**Employee Number:** 117687

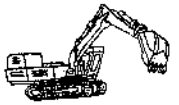
**Signature:**

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE Track Hoe

ENDING HRS. 4970



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/8/09

SUPERVISOR S. Kellett

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | O | O |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | O | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | O |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | O | O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | N/A |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | O | O |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | O | O | O | O | O |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

**Employee Number:** 117627

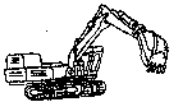
**Signature:** Chris J Bain

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE Track Hoe

ENDING HRS. 4982



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/15/09

SUPERVISOR S. Keitor

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | O | O |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | O | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | O |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | O | O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | N/A |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | N/A | O | O | O | O |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

Needs Wiper Blade — Replaced 5/13

**Employee Number:** 1176371

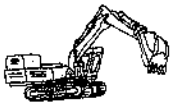
**Signature:** Chuck G Burns

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE Track Hoe

ENDING HRS. 4984



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/22/09

SUPERVISOR S. Kittak

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | O | |
| 6 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | N/A | N/A | N/A | N/A | |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | O | |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | O | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

Hour Meter not working properly

**Employee Number:** 117627

**Signature:** Chad J Bass

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

RA-604 Rev 1-98

# RFAAP, Alliant Techsystems, Inc.
# Subcontractor Hot Work Permit

12193

Location HWMU 51; Magazine Bay # _____ Owner Eddie Wright 230-7854

Subcontractor Authorized Shaw Environmental

Devices to be used ATV Rig for soil boring

Scope of work (in detail) Geoprobe soil boring at HWMU 51

Special Precautions _____

**Checklist** √ Appropriate conditions met for approval

- ___ Combustibles 50' from Hot Work
- ___ Hot Work adjacent to combustibles
- ___ Combustibles covered
- ___ Floor or wall openings protected
- ___ Conveyors/chutes protected
- ___ Vapors contained so not to enter
- ___ Fresh air required
- ___ Exhaust required
- ___ Flashing required
- ___ Floor swept clean of combustibles
- ✓ Extinguisher on site
- ___ Charged water hose
- ___ Bldg Protection
- ___ Piping Protected
- ___ Bldg posted
- ___ Training complete
- ___ CSE required
- ___ Area to be kept wet
- ___ NG remover required
- ___ LEL Reading ____%

**Special PPE Required**

_____

Model _____

Row# _____

Last cal. _____

Fire watch ☐ Required ☐ Not Required

Permit valid for the day(s) of 12-30-08 thru 12-31-08

For the time period 0800 to 1700

**Approval Signatures**

Operating Matt Alcott Engineer Matt Alcott

Safety _____ Subcontractor _____

White - Safety Yellow - Engineering Blue - Operations Green - Subcontractors

RA-603 (REV. 7/05)

# RADFORD ARMY AMMUNITION PLANT
## Alliant Ammunition & Energetics
## Radford, Virginia

Date 2-6-09

## AREA ENTRY PERMIT
(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to Shaw Environmental Inc.

Area of Work: SWMU 51

Description of work to be performed: Soil removal and replacement to grade with clean fill

Special Precautions and/or Limitations to be followed: Yield to incoming and outgoing powder vans at 1/01.13.

This permit is authorizing entry for the following period:

beginning Feb. 6th 2009 at 0800 a.m. p.m.

and ending _____ 20____ at _____ a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

| | |
|---|---|
| [signature] | [signature] |
| Operating Department | Engineer |
| [signature] | |
| Safety Department | Contractor's Representative |

**WHITE-SAFETY**
**YELLOW-ENGINEERING**
**BLUE- OPR. DEPT.**
**GREEN-SUBCONTRACTOR**

RA-603 (REV. 7/05)

# RADFORD ARMY AMMUNITION PLANT
## Alliant Ammunition & Energetics
## Radford, Virginia

Date 12-16-08

## AREA ENTRY PERMIT
(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to Shaw Environmental

Area of Work: SWMU 51 ; Magazine Storage Area

Description of work to be performed:

Erosion and Sediment Control Installation
Soil excavation ; soil replacement

Special Precautions and/or Limitations to be followed:

Stay 50' away from explosive magazines
Stop Work if lightning within 10 miles
Stop work if high winds

This permit is authorizing entry for the following period:

beginning Dec 16 2008 20 08 at 8:30 a.m. p.m.

and ending Feb 01, 2009 20 09 at 5:00 a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

| | |
|---|---|
| Operating Department | Engineer |
| Safety Department | Contractor's Representative |

**WHITE-SAFETY**
**YELLOW-ENGINEERING**
**BLUE- OPR. DEPT.**
**GREEN-SUBCONTRACTOR**

RA-603 (REV. 7/05)

# RADFORD ARMY AMMUNITION PLANT
## Alliant Ammunition & Energetics
## Radford, Virginia

Date 4-6-09

## AREA ENTRY PERMIT (Mod @ 1007)
(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to Shaw Environmental Services

Area of Work: Swmu 51 ; west of 4410-13

Description of work to be performed: DNT Contaminated Sludge removal; Backfill the hole, grade and seed.

Special Precautions and/or Limitations to be followed: Yield to powder vans.

This permit is authorizing entry for the following period:

beginning April 6th 20 09 at 0700 a.m. p.m.

and ending April 30th 20 09 at 1600 a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

Operating Department

Engineer

Safety Department

Contractor's Representative

**WHITE-SAFETY**
**YELLOW-ENGINEERING**
**BLUE- OPR. DEPT.**
**GREEN-SUBCONTRACTOR**

RA-603 (REV. 7/05)

# RADFORD ARMY AMMUNITION PLANT
## Alliant Ammunition & Energetics
## Radford, Virginia

Date 5-5-09 mm

## AREA ENTRY PERMIT
(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to Shaw Environmental Inc.

Area of Work: SWMU 51 ; west of 4601-13

Description of work to be performed: Fill excavated site back to grade with clean soil and seed.

Special Precautions and/or Limitations to be followed: Keep 50 ft away from buildings ; yield to powder vans.

This permit is authorizing entry for the following period:

beginning 5-5-09 mm 20 09 at 0700 a.m. p.m.

and ending 6-5-09 20 ____ at 1900 a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

| | |
|---|---|
| Operating Department | Engineer |
| Safety Department | Contractor's Representative |

**WHITE-SAFETY**
**YELLOW-ENGINEERING**
**BLUE- OPR. DEPT.**
**GREEN-SUBCONTRACTOR**

RA-603 (REV. 7/05)

**RADFORD ARMY AMMUNITION PLANT**
**Alliant Ammunition & Energetics**
**Radford, Virginia**

Date 7-31-09

# AREA ENTRY PERMIT

(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to Shaw Env. Corp

Area of Work: SWMU 51 (West of 4401-13) Magazine Area

Description of work to be performed:

Add topsoil to excavated area, grade & seed.

Special Precautions and/or Limitations to be followed: Yield to powder vans

This permit is authorizing entry for the following period:

beginning 7-31-09 20 09 at 0700 a.m. p.m.

and ending 8-31-09 20 09 at 1900 a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

Operating Department

Safety Department

Engineer

Contractor's Representative

**WHITE-SAFETY**
**YELLOW-ENGINEERING**
**BLUE- OPR. DEPT.**
**GREEN-SUBCONTRACTOR**

# SWMU 39 IM Completion Report Appendices

# Appendices

# Appendix A

## Photo Log

# Tree Removal, Excavation & Loading










# Soil Sampling





# Site Restoration



During Removal Activities




After Backfill and Seeding

# Appendix B

IM Data

# Appendix B-1

# Laboratory Results

**Radford AAP - SWMU 39**
**XRF Results Summary - Borrow Area (March 31, 2009)**

| LiveTime | Date | Time | Reading | Sample Loc | Depth | Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- | Hg | Hg +/- | Sb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65.28 | 31-Mar-09 | 14:41:01 | 6 | 39-DW15 | 0-6 | 14.4 | 2.4 | <LOD | 5.4 | <LOD | 15.2 | <LOD | 37.3 | 39.5 | 3.6 | <LOD | 7.3 | <LOD |
| 66.68 | 31-Mar-09 | 15:01:19 | 7 | 39-DW16 | 0-6 | 23.0 | 2.7 | <LOD | 5.7 | <LOD | 15.7 | <LOD | 38.9 | 49.3 | 3.9 | <LOD | 7.2 | <LOD |
| 66.01 | 31-Mar-09 | 15:05:10 | 8 | 39-DW16 (R2) | 0-6 | 19.8 | 2.6 | <LOD | 5.5 | <LOD | 15.1 | <LOD | 36.5 | 61.1 | 4.1 | <LOD | 6.6 | <LOD |
| 67.14 | 31-Mar-09 | 15:09:54 | 9 | 39-DW16 (R3) | 0-6 | 12.0 | 2.4 | <LOD | 5.4 | <LOD | 15.2 | <LOD | 37.7 | 49.5 | 3.9 | <LOD | 7.4 | <LOD |
| | | | | | AVG | 18.3 | | | | | | | | 53.3 | | | | |
| | | | | | STD | 31% | | | | | | | | 13% | | | | |
| 66.92 | 31-Mar-09 | 15:30:04 | 10 | 39-DW17 | 0-6 | 21.3 | 2.6 | <LOD | 5.6 | <LOD | 16.2 | <LOD | 37.0 | 44.6 | 3.8 | <LOD | 6.7 | <LOD |

**Radford AAP - SWMU 39**
**XRF Results Summary - Borrow Area (March 31, 2009)**

| LiveTime | Date | Time | Reading | Sample Loc | Depth | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- | Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65.28 | 31-Mar-09 | 14:41:01 | 6 | 39-DW15 | 0-6 | 79.7 | 18,220.2 | 177.8 | <LOD | 88.9 | <LOD | 40.7 | <LOD | 75.9 | <LOD | 56.7 | <LOD | 147.9 |
| 66.68 | 31-Mar-09 | 15:01:19 | 7 | 39-DW16 | 0-6 | 79.1 | 21,058.9 | 203.8 | <LOD | 90.7 | <LOD | 41.2 | <LOD | 75.7 | <LOD | 57.6 | <LOD | 145.8 |
| 66.01 | 31-Mar-09 | 15:05:10 | 8 | 39-DW16 (R2) | 0-6 | 78.9 | 20,343.1 | 195.9 | <LOD | 86.4 | <LOD | 40.9 | <LOD | 75.5 | <LOD | 57.0 | <LOD | 144.4 |
| 67.14 | 31-Mar-09 | 15:09:54 | 9 | 39-DW16 (R3) | 0-6 | 80.3 | 19,790.5 | 195.6 | <LOD | 97.9 | <LOD | 41.4 | <LOD | 77.0 | <LOD | 58.0 | <LOD | 145.7 |
| | | | | | AVG | | 20,397.5 | | | | | | | | | | | |
| | | | | | STD | | 3% | | | | | | | | | | | |
| 66.92 | 31-Mar-09 | 15:30:04 | 10 | 39-DW17 | 0-6 | 79.2 | 18,961.8 | 186.9 | <LOD | 94.5 | <LOD | 41.0 | <LOD | 75.9 | <LOD | 57.4 | <LOD | 142.0 |

**Radford AAP - SWMU 39**
**XRF Results Summary - Borrow Area (March 31, 2009)**

| LiveTime | Date | Time | Reading | Sample Loc | Depth | Co | Co +/- | Mn | Mn +/- | Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65.28 | 31-Mar-09 | 14:41:01 | 6 | 39-DW15 | 0-6 | <LOD | 11.5 | 699.4 | 33.0 | 46.7 | 6.1 | 50.7 | 1.6 | <LOD | 2.4 | 64.1 | 1.8 | 7,740.2 |
| 66.68 | 31-Mar-09 | 15:01:19 | 7 | 39-DW16 | 0-6 | <LOD | 12.6 | 582.9 | 32.2 | 42.6 | 6.2 | 59.6 | 1.7 | <LOD | 2.7 | 66.4 | 1.9 | 6,944.0 |
| 66.01 | 31-Mar-09 | 15:05:10 | 8 | 39-DW16 (R2) | 0-6 | <LOD | 12.1 | 671.4 | 33.1 | 32.7 | 6.1 | 59.7 | 1.7 | <LOD | 2.3 | 64.8 | 1.9 | 6,207.1 |
| 67.14 | 31-Mar-09 | 15:09:54 | 9 | 39-DW16 (R3) | 0-6 | 13.3 | 4.1 | 664.2 | 33.7 | 36.4 | 6.2 | 56.8 | 1.7 | <LOD | 2.2 | 71.0 | 2.0 | 7,062.8 |
| | | | | | AVG | | | 639.5 | | 37.2 | | 58.7 | | | | 67.4 | | 6,737.9 |
| | | | | | STD | | | 8% | | 13% | | 3% | | | | 5% | | 7% |
| 66.92 | 31-Mar-09 | 15:30:04 | 10 | 39-DW17 | 0-6 | <LOD | 12.0 | 499.7 | 30.4 | 35.5 | 6.1 | 51.8 | 1.6 | <LOD | 2.3 | 66.4 | 1.9 | 6,622.7 |

**Radford AAP - SWMU 39**
**XRF Results Summary - Borrow Area (March 31, 2009)**

| LiveTime | Date | Time | Reading | Sample Loc | Depth | Ti +/- | Zr | Zr +/- |
|---|---|---|---|---|---|---|---|---|
| 65.28 | 31-Mar-09 | 14:41:01 | 6 | 39-DW15 | 0-6 | 387.5 | 308.6 | 3.9 |
| | | | | | | | | |
| 66.68 | 31-Mar-09 | 15:01:19 | 7 | 39-DW16 | 0-6 | 379.1 | 283.3 | 3.7 |
| 66.01 | 31-Mar-09 | 15:05:10 | 8 | 39-DW16 (R2) | 0-6 | 366.3 | 295.9 | 3.8 |
| 67.14 | 31-Mar-09 | 15:09:54 | 9 | 39-DW16 (R3) | 0-6 | 381.5 | 296.9 | 3.9 |
| | | | | | AVG | | 292.0 | |
| | | | | | STD | | 3% | |
| | | | | | | | | |
| 66.92 | 31-Mar-09 | 15:30:04 | 10 | 39-DW17 | 0-6 | 369.0 | 281.2 | 3.7 |

SWMU 39
Dioxin Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC01 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC01 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |

SWMU 39
Dioxin Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39SC03 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC03 | SO |
| RFAAP | SWMU39 | 39SC05 | 1.0 | 2.0 | TAWS | G9E130208 | 39SC05

SWMU 39
Dioxin Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39SC07 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC07 | SO |
| RFAAP | SWMU39 | 39SC07 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC07 | SO |
| RFAAP | SWMU39 | 39SC08 | 1.0 | 2.0 | TAWS | G9E130208 | 39SC08

SWMU 39
Dioxin Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39SC10 | 1.0 | 2.0 | TAWS | G9E130208 | 39SC10 | SO |
| RFAAP | SWMU39 | 39SC10 | 1.0 | 2.0 | TAWS | G9E130208 | 39SC10 | SO |
| RFAAP | SWMU39 | 39SC10 | 1.0 | 2.0 | TAWS | G9E130208 | 39SC10 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39TMSC01 | 1.0 | 2.0 | TAWS | G9E130208 | 39TMSC01 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |

SWMU 39
Dioxin Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC12 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC12 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC14 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC14 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |

SWMU 39
Dioxin Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC16 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC16 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC18 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC18 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |

SWMU 39
Dioxin Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39SC19 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC19 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39TMSC02 | 0.0 | 1.0 | TAWS | G9E130208 | 39TMSC02 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |

SWMU 39
Dioxin Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC21 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC21 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |
| RFAAP | SWMU39 | 39SC22 | 0.0 | 1.0 | TAWS | G9E130208 | 39SC22 | SO |

SWMU 39
Dioxin Confirmations

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date |
|---|---|---|---|---|---|
| G9E130208001 | 8290 | 8290 | 05/12/09 | 05/13/09 | 05/14/09 |
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SWMU 39
Dioxin Confirmations

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Dioxin Confirmations

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Dioxin Confirmations

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Dioxin Confirmations

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Dioxin Confirmations

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Dioxin Confirmations

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| G9E130208024 | 8290 | 8290 | 05/12/09 | 05/13/09 | 05/14/09 |
| G9E130208024 | 8290 | 8290 | 05/12/09 | 05/13/09 | 05/14/09 |
| G9E130208024DL | 8290 | 8290 | 05/12/09 | 05/13/09 | 05/14/09 |
| G9E130208024 | D2216-90 | D 2216-90 | 05/12/09 | 05/13/09 | 05/14/09 |

SWMU 39
Dioxin Confirmations

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 05/15/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.21 | J B | B | B |
| 05/15/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.19 | J Q B | B | B |
| 05/15/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.12 | J Q B | B | B |
| 05/15/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.27 | J B | B | B |
| 05/15/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.070 | J Q | J | J |
| 05/15/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 5.9 | U | | U |
| 05/15/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.20 | J B | B | B |
| 05/15/09 | 39001-02-0 | OCDF | 0.74 | J B | B | B |
| 05/15/09 | 55722-27-5 | Total TCDF | 0.55 | | B | B |
| 05/15/09 | 30402-15-4 | Total PeCDF | 0.68 | | B | B |
| 05/15/09 | 55684-94-1 | Total HxCDF | 0.86 | | B | B |
| 05/15/09 | 38998-75-3 | Total HpCDF | 0.51 | | B | B |
| 05/15/09 | 41903-57-5 | Total TCDD | 0.41 | | | |
| 05/15/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.067 | J Q | J | J |
| 05/15/09 | 36088-22-9 | Total PeCDD | 0.96 | | | |
| 05/15/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 0.27 | J | J | J |
| 05/15/09 | 34465-46-8 | Total HxCDD | 11.0 | | | |
| 05/15/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 1.2 | J | J | J |
| 05/15/09 | 37871-00-4 | Total HpCDD | 150 | | | |
| 05/15/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 65.0 | B | | B |
| 05/15/09 | 3268-87-9 | OCDD | 3500 | B | | B |
| 05/15/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.096 | J Q B | B | B |
| 05/15/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.11 | J Q B | B | B |
| 05/15/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.62 | J | J | J |
| 05/15/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.72 | J B | J | J |
| 05/15/09 | Q1028 | Percent Moisture | 16.9 | | | |
| 05/15/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.26 | J Q B | B | B |
| 05/15/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.25 | J B | B | B |
| 05/15/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.15 | J B | B | B |
| 05/15/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.17 | J Q B | B | B |
| 05/15/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.074 | J Q | J | J |
| 05/15/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 6.5 | U | | U |
| 05/15/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.075 | J Q B | B | B |
| 05/15/09 | 39001-02-0 | OCDF | 0.48 | J B | B | B |
| 05/15/09 | 55722-27-5 | Total TCDF | 0.42 | | B | B |
| 05/15/09 | 30402-15-4 | Total PeCDF | 0.84 | | B | B |
| 05/15/09 | 55684-94-1 | Total HxCDF | 0.82 | | B | B |
| 05/15/09 | 38998-75-3 | Total HpCDF | 0.18 | | B | B |
| 05/15/09 | 41903-57-5 | Total TCDD | 1.3 | U | | U |
| 05/15/09 | 1746-01-6 | 2,3,7,8-TCDD | 1.3 | U | | U |
| 05/15/09 | 36088-22-9 | Total PeCDD | 6.5 | U | | U |
| 05/15/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 6.5 | U | | U |
| 05/15/09 | 34465-46-8 | Total HxCDD | 2.4 | | | |
| 05/15/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.39 | J | J | J |
| 05/15/09 | 37871-00-4 | Total HpCDD | 38.0 | | | |
| 05/15/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 19.0 | B | | B |
| 05/15/09 | 3268-87-9 | OCDD | 1600 | B | | B |
| 05/15/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.073 | J B | B | B |
| 05/15/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 6.5 | U | | U |
| 05/15/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.17 | J | J | J |
| 05/15/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.17 | J Q B | J | J |

SWMU 39
Dioxin Confirmations

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 05/15/09 | Q1028 | Percent Moisture | 23.9 | | | |
| 05/15/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.18 | J Q B | B | B |
| 05/15/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.24 | J B | B | B |
| 05/15/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.12 | J Q B | B | B |
| 05/15/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.28 | J B | B | B |
| 05/15/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.072 | J Q | J | J |
| 05/15/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.031 | J Q B | B | B |
| 05/15/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.20 | J B | B | B |
| 05/15/09 | 39001-02-0 | OCDF | 0.96 | J B | B | B |
| 05/15/09 | 55722-27-5 | Total TCDF | 0.35 | | B | B |
| 05/15/09 | 30402-15-4 | Total PeCDF | 0.70 | | B | B |
| 05/15/09 | 55684-94-1 | Total HxCDF | 0.94 | | B | B |
| 05/15/09 | 38998-75-3 | Total HpCDF | 0.51 | | B | B |
| 05/15/09 | 41903-57-5 | Total TCDD | 0.27 | | | |
| 05/15/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.048 | J Q | J | J |
| 05/15/09 | 36088-22-9 | Total PeCDD | 6.0 | U | | U |
| 05/15/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 6.0 | U | | U |
| 05/15/09 | 34465-46-8 | Total HxCDD | 6.0 | | | |
| 05/15/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 1.0 | J | J | J |
| 05/15/09 | 37871-00-4 | Total HpCDD | 140 | | | |
| 05/15/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 73.0 | B | | B |
| 05/15/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.083 | J B | B | B |
| 05/15/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.11 | J Q B | B | B |
| 05/15/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.37 | J Q | J | J |
| 05/15/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.40 | J Q B | J | J |
| 05/19/09 | 3268-87-9 | OCDD | 5400 | B | | B |
| 05/15/09 | Q1028 | Percent Moisture | 18.6 | | | |
| 05/16/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.21 | J B | B | B |
| 05/16/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.15 | J Q B | B | B |
| 05/16/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.064 | J Q B | B | B |
| 05/16/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.28 | J B | B | B |
| 05/16/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.058 | J Q | J | J |
| 05/16/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.055 | J Q B | B | B |
| 05/16/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.23 | J B | B | B |
| 05/16/09 | 39001-02-0 | OCDF | 0.19 | J Q B | B | B |
| 05/16/09 | 55722-27-5 | Total TCDF | 0.37 | | B | B |
| 05/16/09 | 30402-15-4 | Total PeCDF | 0.47 | | B | B |
| 05/16/09 | 55684-94-1 | Total HxCDF | 0.84 | | B | B |
| 05/16/09 | 38998-75-3 | Total HpCDF | 0.48 | | B | B |
| 05/16/09 | 41903-57-5 | Total TCDD | 0.16 | | | |
| 05/16/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.073 | J Q | J | J |
| 05/16/09 | 36088-22-9 | Total PeCDD | 6.1 | U | | U |
| 05/16/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 6.1 | U | | U |
| 05/16/09 | 34465-46-8 | Total HxCDD | 2.9 | | | |
| 05/16/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.81 | J | J | J |
| 05/16/09 | 37871-00-4 | Total HpCDD | 53.0 | | | |
| 05/16/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 30.0 | B | | B |
| 05/16/09 | 3268-87-9 | OCDD | 1900 | B | | B |
| 05/16/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.084 | J B | B | B |
| 05/16/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.17 | J Q B | B | B |
| 05/16/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.24 | J Q | J | J |

SWMU 39
Dioxin Confirmations

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 05/16/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.30 | J Q B | J | J |
| 05/15/09 | Q1028 | Percent Moisture | 19.5 | | | |
| 05/16/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.15 | J Q B | B | B |
| 05/16/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.23 | J B | B | B |
| 05/16/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.12 | J Q B | B | B |
| 05/16/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.29 | J B | B | B |
| 05/16/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.12 | J | J | J |
| 05/16/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.037 | J B | B | B |
| 05/16/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.23 | J Q B | B | B |
| 05/16/09 | 39001-02-0 | OCDF | 1.1 | J B | J | J |
| 05/16/09 | 55722-27-5 | Total TCDF | 0.36 | | B | B |
| 05/16/09 | 30402-15-4 | Total PeCDF | 0.76 | | B | B |
| 05/16/09 | 55684-94-1 | Total HxCDF | 1.1 | | B | B |
| 05/16/09 | 38998-75-3 | Total HpCDF | 0.60 | | B | B |
| 05/16/09 | 41903-57-5 | Total TCDD | 0.14 | | | |
| 05/16/09 | 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U |
| 05/16/09 | 36088-22-9 | Total PeCDD | 5.9 | U | | U |
| 05/16/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 5.9 | U | | U |
| 05/16/09 | 34465-46-8 | Total HxCDD | 4.1 | | | |
| 05/16/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.82 | J | J | J |
| 05/16/09 | 37871-00-4 | Total HpCDD | 99.0 | | | |
| 05/16/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 51.0 | B | | B |
| 05/16/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.073 | J B | B | B |
| 05/16/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.17 | J Q B | B | B |
| 05/16/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.30 | J Q | J | J |
| 05/16/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.26 | J Q B | J | J |
| 05/18/09 | 3268-87-9 | OCDD | 5300 | B | | B |
| 05/15/09 | Q1028 | Percent Moisture | 18.2 | | | |
| 05/21/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.40 | J | J | J |
| 05/21/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.52 | J Q B | B | B |
| 05/21/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.28 | J Q | B | B |
| 05/21/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 1.4 | J B | B | B |
| 05/21/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.53 | J B | J | J |
| 05/21/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.25 | J Q B | B | B |
| 05/21/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 2.7 | J B | J | J |
| 05/21/09 | 39001-02-0 | OCDF | 3.2 | J Q | J | J |
| 05/21/09 | 55722-27-5 | Total TCDF | 0.79 | | | |
| 05/21/09 | 30402-15-4 | Total PeCDF | 1.9 | | | |
| 05/21/09 | 55684-94-1 | Total HxCDF | 5.0 | | B | B |
| 05/21/09 | 38998-75-3 | Total HpCDF | 5.7 | | J | J |
| 05/21/09 | 41903-57-5 | Total TCDD | 1.2 | U | | U |
| 05/21/09 | 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U |
| 05/21/09 | 36088-22-9 | Total PeCDD | 0.86 | | | |
| 05/21/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 5.9 | U | | U |
| 05/21/09 | 34465-46-8 | Total HxCDD | 18.0 | | J | J |
| 05/21/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 2.1 | J | J | J |
| 05/21/09 | 37871-00-4 | Total HpCDD | 180 | | | |
| 05/21/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 97.0 | B | | B |
| 05/21/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.42 | J Q B | J | J |
| 05/21/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 1.2 | J B | B | B |
| 05/21/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 1.6 | J | J | J |

SWMU 39
Dioxin Confirmations

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 05/21/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 1.4 | J | J | J |
| 05/20/09 | 3268-87-9 | OCDD | 9600 | B | | B |
| 05/15/09 | Q1028 | Percent Moisture | 16.5 | | | |
| 05/16/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.33 | J B | B | B |
| 05/16/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.27 | J B | B | B |
| 05/16/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.15 | J Q B | B | B |
| 05/16/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.44 | J B | B | B |
| 05/16/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.17 | J | J | J |
| 05/16/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.25 | J Q B | J | J |
| 05/16/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.65 | J B | J | J |
| 05/16/09 | 39001-02-0 | OCDF | 1.3 | J B | J | J |
| 05/16/09 | 55722-27-5 | Total TCDF | 1.1 | | B | B |
| 05/16/09 | 30402-15-4 | Total PeCDF | 1.4 | | B | B |
| 05/16/09 | 55684-94-1 | Total HxCDF | 1.7 | | B | B |
| 05/16/09 | 38998-75-3 | Total HpCDF | 1.1 | | | |
| 05/16/09 | 41903-57-5 | Total TCDD | 0.21 | | | |
| 05/16/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.068 | J Q | J | J |
| 05/16/09 | 36088-22-9 | Total PeCDD | 0.86 | | | |
| 05/16/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 0.11 | J Q | J | J |
| 05/16/09 | 34465-46-8 | Total HxCDD | 9.0 | | J | J |
| 05/16/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.93 | J | J | J |
| 05/16/09 | 37871-00-4 | Total HpCDD | 140 | | | |
| 05/16/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 68.0 | B | | B |
| 05/16/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.12 | J Q B | B | B |
| 05/16/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.12 | J B | B | B |
| 05/16/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.50 | J Q | J | J |
| 05/16/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.57 | J Q B | J | J |
| 05/18/09 | 3268-87-9 | OCDD | 6500 | B | | B |
| 05/15/09 | Q1028 | Percent Moisture | 17.2 | | | |
| 05/16/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.23 | J B | B | B |
| 05/16/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.18 | J Q B | B | B |
| 05/16/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.13 | J Q B | B | B |
| 05/16/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.30 | J Q B | B | B |
| 05/16/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.13 | J | J | J |
| 05/16/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 6.2 | U | | U |
| 05/16/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.44 | J Q B | J | J |
| 05/16/09 | 39001-02-0 | OCDF | 1.6 | J B | J | J |
| 05/16/09 | 55722-27-5 | Total TCDF | 0.64 | | B | B |
| 05/16/09 | 30402-15-4 | Total PeCDF | 0.96 | | B | B |
| 05/16/09 | 55684-94-1 | Total HxCDF | 1.4 | | B | B |
| 05/16/09 | 38998-75-3 | Total HpCDF | 1.4 | | | |
| 05/16/09 | 41903-57-5 | Total TCDD | 0.13 | | | |
| 05/16/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.055 | J Q | J | J |
| 05/16/09 | 36088-22-9 | Total PeCDD | 6.2 | U | | U |
| 05/16/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 6.2 | U | | U |
| 05/16/09 | 34465-46-8 | Total HxCDD | 3.8 | | | |
| 05/16/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.59 | J | J | J |
| 05/16/09 | 37871-00-4 | Total HpCDD | 55.0 | | | |
| 05/16/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 27.0 | B | | B |
| 05/16/09 | 3268-87-9 | OCDD | 3500 | B | | B |
| 05/16/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.10 | J B | B | B |

SWMU 39
Dioxin Confirmations

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 05/16/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.15 | J Q B | B | B |
| 05/16/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.21 | J Q | J | J |
| 05/16/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.27 | J Q B | J | J |
| 05/15/09 | Q1028 | Percent Moisture | 19.6 | | | |
| 05/16/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.21 | J Q B | B | B |
| 05/16/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.28 | J B | B | B |
| 05/16/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.12 | J B | B | B |
| 05/16/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.31 | J Q B | B | B |
| 05/16/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.075 | J | J | J |
| 05/16/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.059 | J B | B | B |
| 05/16/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.19 | J Q B | B | B |
| 05/16/09 | 39001-02-0 | OCDF | 0.47 | J B | B | B |
| 05/16/09 | 55722-27-5 | Total TCDF | 0.45 | | B | B |
| 05/16/09 | 30402-15-4 | Total PeCDF | 0.85 | | B | B |
| 05/16/09 | 55684-94-1 | Total HxCDF | 1.1 | | B | B |
| 05/16/09 | 38998-75-3 | Total HpCDF | 0.48 | | B | B |
| 05/16/09 | 41903-57-5 | Total TCDD | 0.055 | | | |
| 05/16/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.055 | J Q | J | J |
| 05/16/09 | 36088-22-9 | Total PeCDD | 5.9 | U | | U |
| 05/16/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 5.9 | U | | U |
| 05/16/09 | 34465-46-8 | Total HxCDD | 1.3 | | | |
| 05/16/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.33 | J | J | J |
| 05/16/09 | 37871-00-4 | Total HpCDD | 40.0 | | | |
| 05/16/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 23.0 | B | | B |
| 05/16/09 | 3268-87-9 | OCDD | 2300 | B | | B |
| 05/16/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.055 | J Q B | B | B |
| 05/16/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.13 | J B | B | B |
| 05/16/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.13 | J Q | J | J |
| 05/16/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.099 | J Q B | B | B |
| 05/15/09 | Q1028 | Percent Moisture | 16.3 | | | |
| 05/16/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.18 | J Q B | B | B |
| 05/16/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.18 | J Q B | B | B |
| 05/16/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.14 | J Q B | B | B |
| 05/16/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.23 | J Q B | B | B |
| 05/16/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.053 | J Q | J | J |
| 05/16/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.030 | J Q B | B | B |
| 05/16/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.17 | J Q B | B | B |
| 05/16/09 | 39001-02-0 | OCDF | 0.85 | J Q B | B | B |
| 05/16/09 | 55722-27-5 | Total TCDF | 0.47 | | B | B |
| 05/16/09 | 30402-15-4 | Total PeCDF | 0.52 | | B | B |
| 05/16/09 | 55684-94-1 | Total HxCDF | 0.87 | | B | B |
| 05/16/09 | 38998-75-3 | Total HpCDF | 0.53 | | B | B |
| 05/16/09 | 41903-57-5 | Total TCDD | 0.070 | | | |
| 05/16/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.042 | J Q | J | J |
| 05/16/09 | 36088-22-9 | Total PeCDD | 6.3 | U | | U |
| 05/16/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 6.3 | U | | U |
| 05/16/09 | 34465-46-8 | Total HxCDD | 1.5 | | | |
| 05/16/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.38 | J | J | J |
| 05/16/09 | 37871-00-4 | Total HpCDD | 27.0 | | | |
| 05/16/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 15.0 | B | | B |
| 05/16/09 | 3268-87-9 | OCDD | 1500 | B | | B |

SWMU 39
Dioxin Confirmations

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 05/16/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.053 | J Q B | B | B |
| 05/16/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.089 | J Q B | B | B |
| 05/16/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.11 | J Q | J | J |
| 05/16/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.11 | J Q B | B | B |
| 05/15/09 | Q1028 | Percent Moisture | 21.9 | | | |
| 05/16/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.22 | J Q B | B | B |
| 05/16/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.17 | J Q B | B | B |
| 05/16/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.092 | J Q B | B | B |
| 05/16/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.34 | J B | B | B |
| 05/16/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.16 | J Q | J | J |
| 05/16/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.024 | J Q B | B | B |
| 05/16/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.42 | J B | J | J |
| 05/16/09 | 39001-02-0 | OCDF | 0.67 | J B | B | B |
| 05/16/09 | 55722-27-5 | Total TCDF | 0.59 | | B | B |
| 05/16/09 | 30402-15-4 | Total PeCDF | 0.87 | | B | B |
| 05/16/09 | 55684-94-1 | Total HxCDF | 1.3 | | B | B |
| 05/16/09 | 38998-75-3 | Total HpCDF | 0.83 | | B | B |
| 05/16/09 | 41903-57-5 | Total TCDD | 0.061 | | | |
| 05/16/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.027 | J Q | J | J |
| 05/16/09 | 36088-22-9 | Total PeCDD | 0.099 | | | |
| 05/16/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 6.0 | U | | U |
| 05/16/09 | 34465-46-8 | Total HxCDD | 2.6 | | | |
| 05/16/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.38 | J | J | J |
| 05/16/09 | 37871-00-4 | Total HpCDD | 57.0 | | | |
| 05/16/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 33.0 | B | | B |
| 05/16/09 | 3268-87-9 | OCDD | 3500 | B | | B |
| 05/16/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.12 | J B | B | B |
| 05/16/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.088 | J Q B | B | B |
| 05/16/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.22 | J | J | J |
| 05/16/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.17 | J Q B | J | J |
| 05/15/09 | Q1028 | Percent Moisture | 18.5 | | | |
| 05/16/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.21 | J B | B | B |
| 05/16/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.21 | J Q B | B | B |
| 05/16/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.038 | J B | B | B |
| 05/16/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.20 | J B | B | B |
| 05/16/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.057 | J Q | J | J |
| 05/16/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 6.0 | U | | U |
| 05/16/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.11 | J B | B | B |
| 05/16/09 | 39001-02-0 | OCDF | 0.25 | J Q B | B | B |
| 05/16/09 | 55722-27-5 | Total TCDF | 0.37 | | B | B |
| 05/16/09 | 30402-15-4 | Total PeCDF | 0.70 | | B | B |
| 05/16/09 | 55684-94-1 | Total HxCDF | 0.78 | | B | B |
| 05/16/09 | 38998-75-3 | Total HpCDF | 0.33 | | B | B |
| 05/16/09 | 41903-57-5 | Total TCDD | 1.2 | U | | U |
| 05/16/09 | 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U |
| 05/16/09 | 36088-22-9 | Total PeCDD | 0.12 | | | |
| 05/16/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 6.0 | U | | U |
| 05/16/09 | 34465-46-8 | Total HxCDD | 1.0 | | | |
| 05/16/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.46 | J | J | J |
| 05/16/09 | 37871-00-4 | Total HpCDD | 17.0 | | | |
| 05/16/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 9.9 | B | | B |

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Dioxin Confirmations

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 05/16/09 | 3268-87-9 | OCDD | 700 | B | | B |
| 05/16/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.042 | J Q B | B | B |
| 05/16/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.075 | J Q B | B | B |
| 05/16/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 6.0 | U | | U |
| 05/16/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 6.0 | U B | | U B |
| 05/15/09 | Q1028 | Percent Moisture | 17.0 | | | |
| 05/16/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.22 | J Q B | B | B |
| 05/16/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.17 | J Q B | B | B |
| 05/16/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.067 | J Q B | B | B |
| 05/16/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.26 | J B | B | B |
| 05/16/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.049 | J Q | J | J |
| 05/16/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.075 | J Q B | B | B |
| 05/16/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.082 | J Q B | B | B |
| 05/16/09 | 39001-02-0 | OCDF | 0.31 | J B | B | B |
| 05/16/09 | 55722-27-5 | Total TCDF | 0.43 | | B | B |
| 05/16/09 | 30402-15-4 | Total PeCDF | 0.66 | | B | B |
| 05/16/09 | 55684-94-1 | Total HxCDF | 0.81 | | B | B |
| 05/16/09 | 38998-75-3 | Total HpCDF | 0.19 | | B | B |
| 05/16/09 | 41903-57-5 | Total TCDD | 0.061 | | | |
| 05/16/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.032 | J Q | J | J |
| 05/16/09 | 36088-22-9 | Total PeCDD | 5.9 | U | | U |
| 05/16/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 5.9 | U | | U |
| 05/16/09 | 34465-46-8 | Total HxCDD | 1.3 | | | |
| 05/16/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.37 | J Q | J | J |
| 05/16/09 | 37871-00-4 | Total HpCDD | 18.0 | | | |
| 05/16/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 11.0 | B | | B |
| 05/16/09 | 3268-87-9 | OCDD | 810 | B | | B |
| 05/16/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.053 | J Q B | B | B |
| 05/16/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 5.9 | U | | U |
| 05/16/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.058 | J Q | J | J |
| 05/16/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.088 | J Q B | B | B |
| 05/15/09 | Q1028 | Percent Moisture | 17.5 | | | |
| 05/19/09 | 51207-31-9 | 2,3,7,8-TCDF | 1.2 | U | | U |
| 05/19/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 6.0 | U | | U |
| 05/19/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 6.0 | U | | U |
| 05/19/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.75 | J B | B | B |
| 05/19/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.31 | J | J | J |
| 05/19/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.18 | J Q B | B | B |
| 05/19/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.91 | J B | J | J |
| 05/19/09 | 39001-02-0 | OCDF | 0.50 | J Q B | B | B |
| 05/19/09 | 55722-27-5 | Total TCDF | 1.2 | U | | U |
| 05/19/09 | 30402-15-4 | Total PeCDF | 0.65 | | B | B |
| 05/19/09 | 55684-94-1 | Total HxCDF | 2.5 | | B | B |
| 05/19/09 | 38998-75-3 | Total HpCDF | 1.3 | | | |
| 05/19/09 | 41903-57-5 | Total TCDD | 1.2 | U | | U |
| 05/19/09 | 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U |
| 05/19/09 | 36088-22-9 | Total PeCDD | 6.0 | U | | U |
| 05/19/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 6.0 | U | | U |
| 05/19/09 | 34465-46-8 | Total HxCDD | 2.9 | | | |
| 05/19/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.66 | J | J | J |
| 05/19/09 | 37871-00-4 | Total HpCDD | 51.0 | | | |

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Dioxin Confirmations

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 05/19/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 27.0 | B | | B |
| 05/19/09 | 3268-87-9 | OCDD | 2500 | B | | B |
| 05/19/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.35 | J B | J | J |
| 05/19/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.12 | J Q B | B | B |
| 05/19/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.27 | J Q | J | J |
| 05/19/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.20 | J Q B | J | J |
| 05/15/09 | Q1028 | Percent Moisture | 17.7 | | | |
| 05/19/09 | 51207-31-9 | 2,3,7,8-TCDF | 1.2 | U | | U |
| 05/19/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 6.0 | U | | U |
| 05/19/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 6.0 | U | | U |
| 05/19/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.31 | J B | B | B |
| 05/19/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.082 | J Q | J | J |
| 05/19/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 6.0 | U | | U |
| 05/19/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.19 | J Q B | B | B |
| 05/19/09 | 39001-02-0 | OCDF | 1.2 | J B | J | J |
| 05/19/09 | 55722-27-5 | Total TCDF | 1.2 | U | | U |
| 05/19/09 | 30402-15-4 | Total PeCDF | 0.11 | | B | B |
| 05/19/09 | 55684-94-1 | Total HxCDF | 0.91 | | B | B |
| 05/19/09 | 38998-75-3 | Total HpCDF | 0.40 | | B | B |
| 05/19/09 | 41903-57-5 | Total TCDD | 1.2 | U | | U |
| 05/19/09 | 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U |
| 05/19/09 | 36088-22-9 | Total PeCDD | 6.0 | U | | U |
| 05/19/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 6.0 | U | | U |
| 05/19/09 | 34465-46-8 | Total HxCDD | 3.2 | | | |
| 05/19/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.64 | J | J | J |
| 05/19/09 | 37871-00-4 | Total HpCDD | 160 | | | |
| 05/19/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 94.0 | B | | B |
| 05/19/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.096 | J B | B | B |
| 05/19/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 6.0 | U | | U |
| 05/19/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.22 | J | J | J |
| 05/19/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.20 | J Q B | J | J |
| 05/19/09 | 3268-87-9 | OCDD | 9500 | B | | B |
| 05/15/09 | Q1028 | Percent Moisture | 17.8 | | | |

SWMU 39
Dioxin Confirmations

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| PG/G | 1 | 0.020 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.030 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.032 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.027 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.024 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.029 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.039 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.065 | 12.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.020 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.031 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.025 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.044 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.038 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.038 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.096 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.096 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.073 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.068 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.46 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.46 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 3.1 | 12.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.022 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.050 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.086 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.067 | 5.9 | PP01 | N | T | D | 17 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| PG/G | 1 | 0.028 | 1.3 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.035 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.037 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.039 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.035 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.041 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.064 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.065 | 13.0 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.028 | 1.3 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.036 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.036 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.072 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.043 | 1.3 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.043 | 1.3 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.11 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.11 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.055 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.051 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.23 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.23 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 1.9 | 13.0 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.032 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.082 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.065 | 6.5 | PP01 | N | T | D | 24 |
| PG/G | 1 | 0.051 | 6.5 | PP01 | N | T | D | 24 |

SWMU 39
Dioxin Confirmations

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 24 |
| PG/G | 1 | 0.029 | 1.2 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.027 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.029 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.028 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.025 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.030 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.039 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.050 | 12.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.029 | 1.2 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.028 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.026 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.044 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.032 | 1.2 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.032 | 1.2 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.12 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.12 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.036 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.034 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.40 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.40 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.023 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.050 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.043 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 1 | 0.034 | 6.0 | PP01 | N | T | D | 19 |
| PG/G | 5 | 11 | 60.0 | PP02 | N | T | D | 19 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| PG/G | 1 | 0.015 | 1.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.042 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.045 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.027 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.024 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.029 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.049 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.039 | 12.0 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.015 | 1.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.044 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.026 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.056 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.026 | 1.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.026 | 1.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.090 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.090 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.057 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.053 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.36 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.36 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 2.1 | 12.0 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.022 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.063 | 6.1 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.067 | 6.1 | PP01 | N | T | D | 20 |

SWMU 39
Dioxin Confirmations

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| PG/G | 1 | 0.052 | 6.1 | PP01 | N | T | D | 20 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 20 |
| PG/G | 1 | 0.022 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.034 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.037 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.026 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.023 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.028 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.053 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.059 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.022 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.035 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.025 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.060 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.027 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.027 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.11 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.11 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.044 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.042 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.63 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.63 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.022 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.068 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.052 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.041 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 5 | 2.3 | 59.0 | PP02 | N | T | D | 18 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| PG/G | 1 | 0.12 | 1.2 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.13 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.14 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.18 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.16 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.19 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.55 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.28 | 12.0 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.12 | 1.2 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.13 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.16 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.62 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.20 | 1.2 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.20 | 1.2 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.38 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.38 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.35 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.33 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 2.3 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 2.3 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.14 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.70 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 1 | 0.41 | 5.9 | PP04 | N | T | D | 16 |

SWMU 39
Dioxin Confirmations

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| PG/G | 1 | 0.32 | 5.9 | PP04 | N | T | D | 16 |
| PG/G | 5 | 9.8 | 59.0 | PP02 | N | T | D | 16 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 16 |
| PG/G | 1 | 0.013 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.031 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.033 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.043 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.039 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.046 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.047 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.038 | 12.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.013 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.032 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.040 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.052 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.048 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.048 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.1 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.1 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.11 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.1 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.46 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.46 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.035 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.060 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.13 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.1 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 10 | 6.4 | 120 | PP02 | N | T | D | 17 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| PG/G | 1 | 0.010 | 1.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.036 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.038 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.033 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.030 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.036 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.050 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.046 | 12.0 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.010 | 1.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.037 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.031 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.056 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.030 | 1.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.030 | 1.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.14 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.14 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.076 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.071 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.40 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.40 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 4.0 | 12.0 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.027 | 6.2 | PP01 | N | T | D | 20 |

SWMU 39
Dioxin Confirmations

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| PG/G | 1 | 0.064 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.090 | 6.2 | PP01 | N | T | D | 20 |
| PG/G | 1 | 0.071 | 6.2 | PP01 | N | T | D | 20 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 20 |
| PG/G | 1 | 0.020 | 1.2 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.045 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.049 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.017 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.015 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.018 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.073 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.032 | 12.0 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.020 | 1.2 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.047 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.016 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.081 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.033 | 1.2 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.033 | 1.2 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.12 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.12 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.077 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.072 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.63 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.63 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 1.8 | 12.0 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.014 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.093 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.090 | 5.9 | PP01 | N | T | D | 16 |
| PG/G | 1 | 0.071 | 5.9 | PP01 | N | T | D | 16 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 16 |
| PG/G | 1 | 0.0020 | 1.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.042 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.045 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.014 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.013 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.015 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.042 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.042 | 13.0 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.0020 | 1.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.043 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.014 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.047 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.013 | 1.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.013 | 1.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.11 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.11 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.061 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.057 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.29 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.29 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 1.1 | 13.0 | PP01 | N | T | D | 22 |

SWMU 39
Dioxin Confirmations

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| PG/G | 1 | 0.012 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.054 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.071 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 1 | 0.056 | 6.3 | PP01 | N | T | D | 22 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 22 |
| PG/G | 1 | 0.013 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.038 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.040 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.013 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.012 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.014 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.051 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.021 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.013 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.039 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.012 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.057 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.021 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.021 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.085 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.085 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.038 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.036 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.25 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.25 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 2.7 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.011 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.065 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.045 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.035 | 6.0 | PP01 | N | T | D | 18 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| PG/G | 1 | 0.011 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.033 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.035 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.019 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.017 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.020 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.043 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.050 | 12.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.011 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.034 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.018 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.049 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.031 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.031 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.092 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.092 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.071 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.066 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.31 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.31 | 6.0 | PP01 | N | T | D | 17 |

SWMU 39
Dioxin Confirmations

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| PG/G | 1 | 0.57 | 12.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.016 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.055 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.083 | 6.0 | PP01 | N | T | D | 17 |
| PG/G | 1 | 0.066 | 6.0 | PP01 | N | T | D | 17 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| PG/G | 1 | 0.0020 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.012 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.013 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.021 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.019 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.023 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.044 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.018 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.0020 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.012 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.020 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.049 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.026 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.026 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.077 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.077 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.043 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.040 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.29 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.29 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 1.3 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.017 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.056 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.051 | 5.9 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.040 | 5.9 | PP01 | N | T | D | 18 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| PG/G | 1 | 0.40 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.14 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.15 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.082 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.074 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.088 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.073 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.18 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.40 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.15 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.077 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.082 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.14 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.14 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.23 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.23 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.11 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.1 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.47 | 6.0 | PP01 | N | T | D | 18 |

SWMU 39
Dioxin Confirmations

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| PG/G | 1 | 0.47 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 2.3 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.067 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.093 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.13 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.099 | 6.0 | PP01 | N | T | D | 18 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| PG/G | 1 | 0.40 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.096 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.1 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.056 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.050 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.060 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.087 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.17 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.40 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.1 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.052 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.098 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.16 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.16 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.26 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.26 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.11 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.1 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.72 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.72 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.046 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.11 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.13 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 1 | 0.1 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 5 | 13 | 60.0 | PP02 | N | T | D | 18 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW15 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW15 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW16 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW16 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW17 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW17 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW17 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW17 | SO |

SWMU 39
IDW_Borrow

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG | Field Id | Matrix |
|---|---|---|---|---|---|---|---|---|
| RFAAP | SWMU39 | 39DW17 | 0.0 | 0.5 | TAWS | G9D010148 | 39DW17 | SO |

SWMU 39
IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148001 | D2216-90 | D 2216-90 | 03/31/09 | 04/01/09 | 04/02/09 | 04/07/09 |
| G9D010148001 | DI-LEACHATE | 9045C | 03/31/09 | 04/01/09 | 04/07/09 | 04/07/09 |
| G9D010148001 | 7471A | 7471A | 03/31/09 | 04/01/09 | 04/02/09 | 04/02/09 |
| G9D010148001 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07

SWMU 39
IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/04/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |

SWMU 39
IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148001 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |

SWMU 39
IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 3050B | 6010B | 03/31/09 | 04/01/09 | 04/03/09 | 04/09/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148001 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | D2216-90 | D 2216-90 | 03/31/09 | 04/01/09 | 04/02/09 | 04/07/09 |
| G9D010148002 | DI-LEACHATE | 9045C | 03/31/09 | 04/01/09 | 04/07/09 | 04/07/09 |
| G9D010148002 | 7471A | 7471A | 03/31/09 | 04/01/09 | 04/02/09 | 04/02/09 |
| G9D010148002 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |

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IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |

SWMU 39
IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148002 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07

SWMU 39
IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148002 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |

SWMU 39
IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148002 | 8330 | 8330 | 03/31/09 | 04/01/09 | 04/03/09 | 04/08/09 |
| G9D010148003 | D2216-90 | D 2216-90 | 03/31/09 | 04/01/09 | 04/02/09 | 04/07/09 |
| G9D010148003 | DI-LEACHATE | 9045C | 03/31/09 | 04/01/09 | 04/07/09 | 04/07/09 |
| G9D010148003 | 7471A | 7471A | 03/31/09 | 04/01/09 | 04/02/09 | 04/02/09 |
| G9D010148003 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B/3665A | 8082 | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8081A | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 5035 | 8260B | 03/31/09 | 04/01/09 | 04/04/09 | 04/05/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |

SWMU 39
IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |

SWMU 39
IDW_Borrow

| Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|
| G9D010148003 | 3550B | 8270C | 03/31/09 | 04/01/09 | 04/03/09 | 04/07/09 |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| Q1028 | Percent Moisture | 18.6 | | NOT | |
| Q925 | pH | 6.7 | | VALIDATED | |
| 7439-97-6 | Mercury | 0.030 | B | TO DATE. | B |
| 12674-11-2 | Aroclor 1016 | 41 | U | | U |
| 11104-28-2 | Aroclor 1221 | 41 | U | | U |
| 11141-16-5 | Aroclor 1232 | 41 | U | | U |
| 53469-21-9 | Aroclor 1242 | 41 | U | | U |
| 12672-29-6 | Aroclor 1248 | 41 | U | | U |
| 11097-69-1 | Aroclor 1254 | 41 | U | | U |
| 11096-82-5 | Aroclor 1260 | 41 | U | | U |
| 2051-24-3 | Decachlorobiphenyl | 14 | | | |
| 60-57-1 | Dieldrin | 4.2 | U | | U |
| 959-98-8 | Endosulfan I | 2.1 | U | | U |
| 33213-65-9 | Endosulfan II | 4.2 | U | | U |
| 1031-07-8 | Endosulfan sulfate | 4.2 | U | | U |
| 72-20-8 | Endrin | 4.2 | U | | U |
| 7421-93-4 | Endrin aldehyde | 4.2 | U | | U |
| 53494-70-5 | Endrin ketone | 4.2 | U | | U |
| 76-44-8 | Heptachlor | 2.1 | U | | U |
| 1024-57-3 | Heptachlor epoxide | 2.1 | U | | U |
| 72-43-5 | Methoxychlor | 21 | U | | U |
| 319-84-6 | alpha-BHC | 2.1 | U | | U |
| 319-85-7 | beta-BHC | 2.1 | U | | U |
| 319-86-8 | delta-BHC | 2.1 | U | | U |
| 58-89-9 | gamma-BHC (Lindane) | 2.1 | U | | U |
| 8001-35-2 | Toxaphene | 83 | U | | U |
| 2051-24-3 | Decachlorobiphenyl | 14 | | | |
| 877-09-8 | Tetrachloro-m-xylene | 14 | | | |
| 5103-71-9 | alpha-Chlordane | 2.1 | U | | U |
| 5103-74-2 | gamma-Chlordane | 2.1 | U | | U |
| 309-00-2 | Aldrin | 2.1 | U | | U |
| 72-54-8 | 4,4'-DDD | 4.2 | U | | U |
| 72-55-9 | 4,4'-DDE | 4.2 | U | | U |
| 50-29-3 | 4,4'-DDT | 4.2 | U | | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5.5 | U | | U |
| 67-64-1 | Acetone | 22 | U | | U |
| 100-41-4 | Ethylbenzene | 5.5 | U | | U |
| 591-78-6 | 2-Hexanone | 11 | U | | U |
| 75-09-2 | Methylene chloride | 5.5 | U | | U |
| 71-43-2 | Benzene | 5.5 | U | | U |
| 100-42-5 | Styrene | 5.5 | U | | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.5 | U | | U |
| 127-18-4 | Tetrachloroethene | 5.5 | U | | U |
| 108-88-3 | Toluene | 5.5 | U | | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.5 | U | | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.5 | U | | U |
| 79-01-6 | Trichloroethene | 5.5 | U | | U |
| 75-01-4 | Vinyl chloride | 5.5 | U | | U |
| 95-47-6 | o-Xylene | 5.5 | U | | U |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 120 | | | |
| 2037-26-5 | Toluene-d8 | 110 | | | |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 110 | | | |
| 136777-61-2 | m-Xylene & p-Xylene | 5.5 | U | | U |
| 75-27-4 | Bromodichloromethane | 5.5 | U | | U |
| 78-93-3 | 2-Butanone (MEK) | 11 | U | | U |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 11 | U | | U |
| 460-00-4 | 4-Bromofluorobenzene | 110 | | | |
| 75-25-2 | Bromoform | 5.5 | U | | U |
| 74-83-9 | Bromomethane | 5.5 | U | | U |
| 75-15-0 | Carbon disulfide | 11 | U | | U |
| 56-23-5 | Carbon tetrachloride | 5.5 | U | | U |
| 108-90-7 | Chlorobenzene | 5.5 | U | | U |
| 124-48-1 | Dibromochloromethane | 5.5 | U | | U |
| 75-00-3 | Chloroethane | 5.5 | U | | U |
| 67-66-3 | Chloroform | 5.5 | U | | U |
| 74-87-3 | Chloromethane | 5.5 | U | | U |
| 75-34-3 | 1,1-Dichloroethane | 5.5 | U | | U |
| 107-06-2 | 1,2-Dichloroethane | 5.5 | U | | U |
| 75-35-4 | 1,1-Dichloroethene | 5.5 | U | | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.5 | U | | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.5 | U | | U |
| 78-87-5 | 1,2-Dichloropropane | 5.5 | U | | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.5 | U | | U |
| 83-32-9 | Acenaphthene | 410 | U | | U |
| 84-66-2 | Diethyl phthalate | 410 | U | | U |
| 105-67-9 | 2,4-Dimethylphenol | 610 | U | | U |
| 131-11-3 | Dimethyl phthalate | 410 | U | | U |
| 117-84-0 | Di-n-octyl phthalate | 410 | U | | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 2500 | U | | U |
| 51-28-5 | 2,4-Dinitrophenol | 2500 | U | | U |
| 121-14-2 | 2,4-Dinitrotoluene | 410 | U | | U |
| 606-20-2 | 2,6-Dinitrotoluene | 410 | U | | U |
| 120-12-7 | Anthracene | 410 | U | | U |
| 206-44-0 | Fluoranthene | 410 | U | | U |
| 86-73-7 | Fluorene | 410 | U | | U |
| 321-60-8 | 2-Fluorobiphenyl | 1300 | | | |
| 367-12-4 | 2-Fluorophenol | 1500 | | | |
| 118-74-1 | Hexachlorobenzene | 410 | U | | U |
| 87-68-3 | Hexachlorobutadiene | 410 | U | | U |
| 77-47-4 | Hexachlorocyclopentadiene | 2000 | U | | U |
| 67-72-1 | Hexachloroethane | 410 | U | | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 410 | U | | U |
| 78-59-1 | Isophorone | 410 | U | | U |
| 91-57-6 | 2-Methylnaphthalene | 410 | U | | U |
| 95-48-7 | 2-Methylphenol | 410 | U | | U |
| 91-20-3 | Naphthalene | 410 | U | | U |
| 88-74-4 | 2-Nitroaniline | 2000 | U | | U |
| 99-09-2 | 3-Nitroaniline | 2000 | U | | U |
| 100-01-6 | 4-Nitroaniline | 2000 | U | | U |
| 98-95-3 | Nitrobenzene | 410 | U | | U |
| 88-75-5 | 2-Nitrophenol | 410 | U | | U |
| 100-02-7 | 4-Nitrophenol | 2500 | U | | U |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 621-64-7 | N-Nitrosodi-n-propylamine | 410 | U | | U |
| 86-30-6 | N-Nitrosodiphenylamine | 410 | U | | U |
| 205-99-2 | Benzo(b)fluoranthene | 410 | U | | U |
| 207-08-9 | Benzo(k)fluoranthene | 410 | U | | U |
| 65-85-0 | Benzoic acid | 2000 | U | | U |
| 191-24-2 | Benzo(ghi)perylene | 410 | U | | U |
| 50-32-8 | Benzo(a)pyrene | 410 | U | | U |
| 87-86-5 | Pentachlorophenol | 2500 | U | | U |
| 100-51-6 | Benzyl alcohol | 630 | U | | U |
| 85-01-8 | Phenanthrene | 410 | U | | U |
| 108-95-2 | Phenol | 410 | U | | U |
| 129-00-0 | Pyrene | 410 | U | | U |
| 118-79-6 | 2,4,6-Tribromophenol | 2900 | | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 410 | U | | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 410 | U | | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 410 | U | | U |
| 4165-60-0 | Nitrobenzene-d5 | 1100 | | | |
| 4165-62-2 | Phenol-d5 | 1700 | | | |
| 1718-51-0 | Terphenyl-d14 | 1700 | | | |
| 86-74-8 | Carbazole | 410 | U | | U |
| 65794-96-9 | 3-Methylphenol & 4-Methylphenol | 1200 | U | | U |
| 93951-73-6 | 2-Chlorophenol-d4 | 1500 | | | |
| 2199-69-1 | 1,2-Dichlorobenzene-d4 | 990 | | | |
| 111-91-1 | bis(2-Chloroethoxy)methane | 410 | U | | U |
| 111-44-4 | bis(2-Chloroethyl) ether | 410 | U | | U |
| 108-60-1 | bis(2-Chloroisopropyl) ether | 410 | U | | U |
| 117-81-7 | bis(2-Ethylhexyl) phthalate | 410 | U | | U |
| 101-55-3 | 4-Bromophenyl phenyl ether | 410 | U | | U |
| 56-55-3 | Benz(a)anthracene | 410 | U | | U |
| 85-68-7 | Butyl benzyl phthalate | 410 | U | | U |
| 208-96-8 | Acenaphthylene | 410 | U | | U |
| 106-47-8 | 4-Chloroaniline | 410 | U | | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 410 | U | | U |
| 91-58-7 | 2-Chloronaphthalene | 410 | U | | U |
| 95-57-8 | 2-Chlorophenol | 410 | U | | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 410 | U | | U |
| 218-01-9 | Chrysene | 410 | U | | U |
| 53-70-3 | Dibenz(a,h)anthracene | 410 | U | | U |
| 132-64-9 | Dibenzofuran | 410 | U | | U |
| 84-74-2 | Di-n-butyl phthalate | 410 | U | | U |
| 95-50-1 | 1,2-Dichlorobenzene | 410 | U | | U |
| 541-73-1 | 1,3-Dichlorobenzene | 410 | U | | U |
| 106-46-7 | 1,4-Dichlorobenzene | 410 | U | | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 2000 | U | | U |
| 120-83-2 | 2,4-Dichlorophenol | 410 | U | | U |
| 7440-36-0 | Antimony | 1.8 | U | | U |
| 7440-38-2 | Arsenic | 3.0 | | | |
| 7439-89-6 | Iron | 17300 | | | |
| 7439-92-1 | Lead | 15.9 | | | |
| 7439-95-4 | Magnesium | 2160 | | | |
| 7440-39-3 | Barium | 148 | | | |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 7440-02-0 | Nickel | 10.4 | | | |
| 7440-09-7 | Potassium | 992 | | | |
| 7440-41-7 | Beryllium | 0.92 | | | |
| 7782-49-2 | Selenium | 2.5 | U | | U |
| 7440-22-4 | Silver | 0.61 | U | | U |
| 7440-23-5 | Sodium | 35.5 | B | | B |
| 7440-28-0 | Thallium | 2.5 | U | | U |
| 7440-62-2 | Vanadium | 33.8 | | | |
| 7440-66-6 | Zinc | 50.5 | | | |
| 7440-47-3 | Chromium | 23 | | | |
| 7440-43-9 | Cadmium | 0.37 | U | | U |
| 7440-70-2 | Calcium | 1220 | | | |
| 7440-48-4 | Cobalt | 10.2 | | | |
| 7440-50-8 | Copper | 11.4 | | | |
| 7429-90-5 | Aluminum | 12600 | | | |
| 7439-96-5 | Manganese | 767 | | | |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U |
| 121-14-2 | 2,4-Dinitrotoluene | 0.25 | U | | U |
| 606-20-2 | 2,6-Dinitrotoluene | 1.2 | U | | U |
| 98-95-3 | Nitrobenzene | 0.25 | U | | U |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U |
| 99-35-4 | 1,3,5-Trinitrobenzene | 0.25 | U | | U |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.25 | U | | U |
| 2691-41-0 | HMX | 0.25 | U | | U |
| 121-82-4 | RDX | 0.25 | U | | U |
| 479-45-8 | Tetryl | 0.25 | U | | U |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U |
| 99-08-1 | 3-Nitrotoluene | 0.25 | U | | U |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U |
| 19406-51-0 | 4-Amino-2,6-dinitrotoluene | 0.25 | U | | U |
| 35572-78-2 | 2-Amino-4,6-dinitrotoluene | 0.25 | U | | U |
| 610-39-9 | 3,4-Dinitrotoluene | 0.46 | | | |
| 78-11-5 | PETN | 0.50 | U | | U |
| Q1028 | Percent Moisture | 18.6 | | | |
| Q925 | pH | 6.6 | | | |
| 7439-97-6 | Mercury | 0.032 | B | | B |
| 12674-11-2 | Aroclor 1016 | 41 | U | | U |
| 11104-28-2 | Aroclor 1221 | 41 | U | | U |
| 11141-16-5 | Aroclor 1232 | 41 | U | | U |
| 53469-21-9 | Aroclor 1242 | 41 | U | | U |
| 12672-29-6 | Aroclor 1248 | 41 | U | | U |
| 11097-69-1 | Aroclor 1254 | 41 | U | | U |
| 11096-82-5 | Aroclor 1260 | 41 | U | | U |
| 2051-24-3 | Decachlorobiphenyl | 15 | | | |
| 60-57-1 | Dieldrin | 4.2 | U | | U |
| 959-98-8 | Endosulfan I | 2.1 | U | | U |
| 33213-65-9 | Endosulfan II | 4.2 | U | | U |
| 1031-07-8 | Endosulfan sulfate | 4.2 | U | | U |
| 72-20-8 | Endrin | 4.2 | U | | U |
| 7421-93-4 | Endrin aldehyde | 4.2 | U | | U |
| 53494-70-5 | Endrin ketone | 4.2 | U | | U |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 76-44-8 | Heptachlor | 2.1 | U | | U |
| 1024-57-3 | Heptachlor epoxide | 2.1 | U | | U |
| 72-43-5 | Methoxychlor | 21 | U | | U |
| 319-84-6 | alpha-BHC | 2.1 | U | | U |
| 319-85-7 | beta-BHC | 2.1 | U | | U |
| 319-86-8 | delta-BHC | 2.1 | U | | U |
| 58-89-9 | gamma-BHC (Lindane) | 2.1 | U | | U |
| 8001-35-2 | Toxaphene | 83 | U | | U |
| 2051-24-3 | Decachlorobiphenyl | 15 | | | |
| 877-09-8 | Tetrachloro-m-xylene | 13 | | | |
| 5103-71-9 | alpha-Chlordane | 2.1 | U | | U |
| 5103-74-2 | gamma-Chlordane | 2.1 | U | | U |
| 309-00-2 | Aldrin | 2.1 | U | | U |
| 72-54-8 | 4,4'-DDD | 4.2 | U | | U |
| 72-55-9 | 4,4'-DDE | 4.2 | U | | U |
| 50-29-3 | 4,4'-DDT | 4.2 | U | | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5.8 | U | | U |
| 67-64-1 | Acetone | 23 | U | | U |
| 100-41-4 | Ethylbenzene | 5.8 | U | | U |
| 591-78-6 | 2-Hexanone | 12 | U | | U |
| 75-09-2 | Methylene chloride | 5.8 | U | | U |
| 71-43-2 | Benzene | 5.8 | U | | U |
| 100-42-5 | Styrene | 5.8 | U | | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.8 | U | | U |
| 127-18-4 | Tetrachloroethene | 5.8 | U | | U |
| 108-88-3 | Toluene | 5.8 | U | | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.8 | U | | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.8 | U | | U |
| 79-01-6 | Trichloroethene | 5.8 | U | | U |
| 75-01-4 | Vinyl chloride | 5.8 | U | | U |
| 95-47-6 | o-Xylene | 5.8 | U | | U |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 120 | | | |
| 2037-26-5 | Toluene-d8 | 120 | | | |
| 1868-53-7 | Dibromofluoromethane | 120 | | | |
| 136777-61-2 | m-Xylene & p-Xylene | 5.8 | U | | U |
| 75-27-4 | Bromodichloromethane | 5.8 | U | | U |
| 78-93-3 | 2-Butanone (MEK) | 12 | U | | U |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 12 | U | | U |
| 460-00-4 | 4-Bromofluorobenzene | 110 | | | |
| 75-25-2 | Bromoform | 5.8 | U | | U |
| 74-83-9 | Bromomethane | 5.8 | U | | U |
| 75-15-0 | Carbon disulfide | 12 | U | | U |
| 56-23-5 | Carbon tetrachloride | 5.8 | U | | U |
| 108-90-7 | Chlorobenzene | 5.8 | U | | U |
| 124-48-1 | Dibromochloromethane | 5.8 | U | | U |
| 75-00-3 | Chloroethane | 5.8 | U | | U |
| 67-66-3 | Chloroform | 5.8 | U | | U |
| 74-87-3 | Chloromethane | 5.8 | U | | U |
| 75-34-3 | 1,1-Dichloroethane | 5.8 | U | | U |
| 107-06-2 | 1,2-Dichloroethane | 5.8 | U | | U |
| 75-35-4 | 1,1-Dichloroethene | 5.8 | U | | U |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 5.8 | U | | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.8 | U | | U |
| 78-87-5 | 1,2-Dichloropropane | 5.8 | U | | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.8 | U | | U |
| 83-32-9 | Acenaphthene | 410 | U | | U |
| 84-66-2 | Diethyl phthalate | 410 | U | | U |
| 105-67-9 | 2,4-Dimethylphenol | 630 | U | | U |
| 131-11-3 | Dimethyl phthalate | 410 | U | | U |
| 117-84-0 | Di-n-octyl phthalate | 410 | U | | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 2500 | U | | U |
| 51-28-5 | 2,4-Dinitrophenol | 2500 | U | | U |
| 121-14-2 | 2,4-Dinitrotoluene | 410 | U | | U |
| 606-20-2 | 2,6-Dinitrotoluene | 410 | U | | U |
| 120-12-7 | Anthracene | 410 | U | | U |
| 206-44-0 | Fluoranthene | 410 | U | | U |
| 86-73-7 | Fluorene | 410 | U | | U |
| 321-60-8 | 2-Fluorobiphenyl | 1300 | | | |
| 367-12-4 | 2-Fluorophenol | 1700 | | | |
| 118-74-1 | Hexachlorobenzene | 410 | U | | U |
| 87-68-3 | Hexachlorobutadiene | 410 | U | | U |
| 77-47-4 | Hexachlorocyclopentadiene | 2000 | U | | U |
| 67-72-1 | Hexachloroethane | 410 | U | | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 410 | U | | U |
| 78-59-1 | Isophorone | 410 | U | | U |
| 91-57-6 | 2-Methylnaphthalene | 410 | U | | U |
| 95-48-7 | 2-Methylphenol | 410 | U | | U |
| 91-20-3 | Naphthalene | 410 | U | | U |
| 88-74-4 | 2-Nitroaniline | 2000 | U | | U |
| 99-09-2 | 3-Nitroaniline | 2000 | U | | U |
| 100-01-6 | 4-Nitroaniline | 2000 | U | | U |
| 98-95-3 | Nitrobenzene | 410 | U | | U |
| 88-75-5 | 2-Nitrophenol | 410 | U | | U |
| 100-02-7 | 4-Nitrophenol | 2500 | U | | U |
| 621-64-7 | N-Nitrosodi-n-propylamine | 410 | U | | U |
| 86-30-6 | N-Nitrosodiphenylamine | 410 | U | | U |
| 205-99-2 | Benzo(b)fluoranthene | 410 | U | | U |
| 207-08-9 | Benzo(k)fluoranthene | 410 | U | | U |
| 65-85-0 | Benzoic acid | 2000 | U | | U |
| 191-24-2 | Benzo(ghi)perylene | 410 | U | | U |
| 50-32-8 | Benzo(a)pyrene | 410 | U | | U |
| 87-86-5 | Pentachlorophenol | 2500 | U | | U |
| 100-51-6 | Benzyl alcohol | 640 | U | | U |
| 85-01-8 | Phenanthrene | 410 | U | | U |
| 108-95-2 | Phenol | 410 | U | | U |
| 129-00-0 | Pyrene | 410 | U | | U |
| 118-79-6 | 2,4,6-Tribromophenol | 3100 | | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 410 | U | | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 410 | U | | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 410 | U | | U |
| 4165-60-0 | Nitrobenzene-d5 | 1200 | | | |
| 4165-62-2 | Phenol-d5 | 1800 | | | |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 1718-51-0 | Terphenyl-d14 | 1900 | | | |
| 86-74-8 | Carbazole | 410 | U | | U |
| 65794-96-9 | 3-Methylphenol & 4-Methylphenol | 1300 | U | | U |
| 93951-73-6 | 2-Chlorophenol-d4 | 1800 | | | |
| 2199-69-1 | 1,2-Dichlorobenzene-d4 | 1100 | | | |
| 111-91-1 | bis(2-Chloroethoxy)methane | 410 | U | | U |
| 111-44-4 | bis(2-Chloroethyl) ether | 410 | U | | U |
| 108-60-1 | bis(2-Chloroisopropyl) ether | 410 | U | | U |
| 117-81-7 | bis(2-Ethylhexyl) phthalate | 410 | U | | U |
| 101-55-3 | 4-Bromophenyl phenyl ether | 410 | U | | U |
| 56-55-3 | Benz(a)anthracene | 410 | U | | U |
| 85-68-7 | Butyl benzyl phthalate | 410 | U | | U |
| 208-96-8 | Acenaphthylene | 410 | U | | U |
| 106-47-8 | 4-Chloroaniline | 410 | U | | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 410 | U | | U |
| 91-58-7 | 2-Chloronaphthalene | 410 | U | | U |
| 95-57-8 | 2-Chlorophenol | 410 | U | | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 410 | U | | U |
| 218-01-9 | Chrysene | 410 | U | | U |
| 53-70-3 | Dibenz(a,h)anthracene | 410 | U | | U |
| 132-64-9 | Dibenzofuran | 410 | U | | U |
| 84-74-2 | Di-n-butyl phthalate | 410 | U | | U |
| 95-50-1 | 1,2-Dichlorobenzene | 410 | U | | U |
| 541-73-1 | 1,3-Dichlorobenzene | 410 | U | | U |
| 106-46-7 | 1,4-Dichlorobenzene | 410 | U | | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 2000 | U | | U |
| 120-83-2 | 2,4-Dichlorophenol | 410 | U | | U |
| 7440-36-0 | Antimony | 1.8 | U | | U |
| 7440-38-2 | Arsenic | 3.5 | | | |
| 7439-89-6 | Iron | 20200 | | | |
| 7439-92-1 | Lead | 19.5 | | | |
| 7439-95-4 | Magnesium | 2560 | | | |
| 7440-39-3 | Barium | 139 | | | |
| 7440-02-0 | Nickel | 12.1 | | | |
| 7440-09-7 | Potassium | 1390 | | | |
| 7440-41-7 | Beryllium | 0.93 | | | |
| 7782-49-2 | Selenium | 2.5 | U | | U |
| 7440-22-4 | Silver | 0.61 | U | | U |
| 7440-23-5 | Sodium | 36.8 | B | | B |
| 7440-28-0 | Thallium | 0.67 | B | | B |
| 7440-62-2 | Vanadium | 36.3 | | | |
| 7440-66-6 | Zinc | 57.1 | | | |
| 7440-47-3 | Chromium | 24.1 | | | |
| 7440-43-9 | Cadmium | 0.37 | U | | U |
| 7440-70-2 | Calcium | 1350 | | | |
| 7440-48-4 | Cobalt | 11.5 | | | |
| 7440-50-8 | Copper | 13.4 | | | |
| 7429-90-5 | Aluminum | 14300 | | | |
| 7439-96-5 | Manganese | 856 | | | |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U |
| 121-14-2 | 2,4-Dinitrotoluene | 0.25 | U | | U |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 606-20-2 | 2,6-Dinitrotoluene | 1.2 | U | | U |
| 98-95-3 | Nitrobenzene | 0.25 | U | | U |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U |
| 99-35-4 | 1,3,5-Trinitrobenzene | 0.25 | U | | U |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.25 | U | | U |
| 2691-41-0 | HMX | 0.25 | U | | U |
| 121-82-4 | RDX | 0.25 | U | | U |
| 479-45-8 | Tetryl | 0.25 | U | | U |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U |
| 99-08-1 | 3-Nitrotoluene | 0.25 | U | | U |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U |
| 19406-51-0 | 4-Amino-2,6-dinitrotoluene | 0.25 | U | | U |
| 35572-78-2 | 2-Amino-4,6-dinitrotoluene | 0.25 | U | | U |
| 610-39-9 | 3,4-Dinitrotoluene | 0.45 | | | |
| 78-11-5 | PETN | 0.50 | U | | U |
| Q1028 | Percent Moisture | 18.8 | | | |
| Q925 | pH | 7.5 | | | |
| 7439-97-6 | Mercury | 0.032 | B | | B |
| 12674-11-2 | Aroclor 1016 | 40 | U | | U |
| 11104-28-2 | Aroclor 1221 | 40 | U | | U |
| 11141-16-5 | Aroclor 1232 | 40 | U | | U |
| 53469-21-9 | Aroclor 1242 | 40 | U | | U |
| 12672-29-6 | Aroclor 1248 | 40 | U | | U |
| 11097-69-1 | Aroclor 1254 | 40 | U | | U |
| 11096-82-5 | Aroclor 1260 | 40 | U | | U |
| 2051-24-3 | Decachlorobiphenyl | 15 | | | |
| 60-57-1 | Dieldrin | 4.1 | U | | U |
| 959-98-8 | Endosulfan I | 2.1 | U | | U |
| 33213-65-9 | Endosulfan II | 4.1 | U | | U |
| 1031-07-8 | Endosulfan sulfate | 4.1 | U | | U |
| 72-20-8 | Endrin | 4.1 | U | | U |
| 7421-93-4 | Endrin aldehyde | 4.1 | U | | U |
| 53494-70-5 | Endrin ketone | 4.1 | U | | U |
| 76-44-8 | Heptachlor | 2.1 | U | | U |
| 1024-57-3 | Heptachlor epoxide | 2.1 | U | | U |
| 72-43-5 | Methoxychlor | 21 | U | | U |
| 319-84-6 | alpha-BHC | 2.1 | U | | U |
| 319-85-7 | beta-BHC | 2.1 | U | | U |
| 319-86-8 | delta-BHC | 2.1 | U | | U |
| 58-89-9 | gamma-BHC (Lindane) | 2.1 | U | | U |
| 8001-35-2 | Toxaphene | 81 | U | | U |
| 2051-24-3 | Decachlorobiphenyl | 16 | | | |
| 877-09-8 | Tetrachloro-m-xylene | 13 | | | |
| 5103-71-9 | alpha-Chlordane | 2.1 | U | | U |
| 5103-74-2 | gamma-Chlordane | 2.1 | U | | U |
| 309-00-2 | Aldrin | 2.1 | U | | U |
| 72-54-8 | 4,4'-DDD | 4.1 | U | | U |
| 72-55-9 | 4,4'-DDE | 4.1 | U | | U |
| 50-29-3 | 4,4'-DDT | 4.1 | U | | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 6.4 | U | | U |
| 67-64-1 | Acetone | 26 | U | | U |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | 6.4 | U | | U |
| 591-78-6 | 2-Hexanone | 13 | U | | U |
| 75-09-2 | Methylene chloride | 6.4 | U | | U |
| 71-43-2 | Benzene | 6.4 | U | | U |
| 100-42-5 | Styrene | 6.4 | U | | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 6.4 | U | | U |
| 127-18-4 | Tetrachloroethene | 6.4 | U | | U |
| 108-88-3 | Toluene | 6.4 | U | | U |
| 71-55-6 | 1,1,1-Trichloroethane | 6.4 | U | | U |
| 79-00-5 | 1,1,2-Trichloroethane | 6.4 | U | | U |
| 79-01-6 | Trichloroethene | 6.4 | U | | U |
| 75-01-4 | Vinyl chloride | 6.4 | U | | U |
| 95-47-6 | o-Xylene | 6.4 | U | | U |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 130 | | | |
| 2037-26-5 | Toluene-d8 | 130 | | | |
| 1868-53-7 | Dibromofluoromethane | 130 | | | |
| 136777-61-2 | m-Xylene & p-Xylene | 6.4 | U | | U |
| 75-27-4 | Bromodichloromethane | 6.4 | U | | U |
| 78-93-3 | 2-Butanone (MEK) | 13 | U | | U |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 13 | U | | U |
| 460-00-4 | 4-Bromofluorobenzene | 120 | | | |
| 75-25-2 | Bromoform | 6.4 | U | | U |
| 74-83-9 | Bromomethane | 6.4 | U | | U |
| 75-15-0 | Carbon disulfide | 13 | U | | U |
| 56-23-5 | Carbon tetrachloride | 6.4 | U | | U |
| 108-90-7 | Chlorobenzene | 6.4 | U | | U |
| 124-48-1 | Dibromochloromethane | 6.4 | U | | U |
| 75-00-3 | Chloroethane | 6.4 | U | | U |
| 67-66-3 | Chloroform | 6.4 | U | | U |
| 74-87-3 | Chloromethane | 6.4 | U | | U |
| 75-34-3 | 1,1-Dichloroethane | 6.4 | U | | U |
| 107-06-2 | 1,2-Dichloroethane | 6.4 | U | | U |
| 75-35-4 | 1,1-Dichloroethene | 6.4 | U | | U |
| 156-59-2 | cis-1,2-Dichloroethene | 6.4 | U | | U |
| 156-60-5 | trans-1,2-Dichloroethene | 6.4 | U | | U |
| 78-87-5 | 1,2-Dichloropropane | 6.4 | U | | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 6.4 | U | | U |
| 83-32-9 | Acenaphthene | 400 | U | | U |
| 84-66-2 | Diethyl phthalate | 400 | U | | U |
| 105-67-9 | 2,4-Dimethylphenol | 600 | U | | U |
| 131-11-3 | Dimethyl phthalate | 400 | U | | U |
| 117-84-0 | Di-n-octyl phthalate | 400 | U | | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 2400 | U | | U |
| 51-28-5 | 2,4-Dinitrophenol | 2400 | U | | U |
| 121-14-2 | 2,4-Dinitrotoluene | 400 | U | | U |
| 606-20-2 | 2,6-Dinitrotoluene | 400 | U | | U |
| 120-12-7 | Anthracene | 400 | U | | U |
| 206-44-0 | Fluoranthene | 400 | U | | U |
| 86-73-7 | Fluorene | 400 | U | | U |
| 321-60-8 | 2-Fluorobiphenyl | 1100 | | | |
| 367-12-4 | 2-Fluorophenol | 1400 | | | |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 400 | U | | U |
| 87-68-3 | Hexachlorobutadiene | 400 | U | | U |
| 77-47-4 | Hexachlorocyclopentadiene | 1900 | U | | U |
| 67-72-1 | Hexachloroethane | 400 | U | | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 400 | U | | U |
| 78-59-1 | Isophorone | 400 | U | | U |
| 91-57-6 | 2-Methylnaphthalene | 400 | U | | U |
| 95-48-7 | 2-Methylphenol | 400 | U | | U |
| 91-20-3 | Naphthalene | 400 | U | | U |
| 88-74-4 | 2-Nitroaniline | 1900 | U | | U |
| 99-09-2 | 3-Nitroaniline | 1900 | U | | U |
| 100-01-6 | 4-Nitroaniline | 1900 | U | | U |
| 98-95-3 | Nitrobenzene | 400 | U | | U |
| 88-75-5 | 2-Nitrophenol | 400 | U | | U |
| 100-02-7 | 4-Nitrophenol | 2400 | U | | U |
| 621-64-7 | N-Nitrosodi-n-propylamine | 400 | U | | U |
| 86-30-6 | N-Nitrosodiphenylamine | 400 | U | | U |
| 205-99-2 | Benzo(b)fluoranthene | 400 | U | | U |
| 207-08-9 | Benzo(k)fluoranthene | 400 | U | | U |
| 65-85-0 | Benzoic acid | 1900 | U | | U |
| 191-24-2 | Benzo(ghi)perylene | 400 | U | | U |
| 50-32-8 | Benzo(a)pyrene | 400 | U | | U |
| 87-86-5 | Pentachlorophenol | 2400 | U | | U |
| 100-51-6 | Benzyl alcohol | 620 | U | | U |
| 85-01-8 | Phenanthrene | 400 | U | | U |
| 108-95-2 | Phenol | 400 | U | | U |
| 129-00-0 | Pyrene | 400 | U | | U |
| 118-79-6 | 2,4,6-Tribromophenol | 2800 | | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 400 | U | | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 400 | U | | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 400 | U | | U |
| 4165-60-0 | Nitrobenzene-d5 | 940 | | | |
| 4165-62-2 | Phenol-d5 | 1500 | | | |
| 1718-51-0 | Terphenyl-d14 | 1900 | | | |
| 86-74-8 | Carbazole | 400 | U | | U |
| 65794-96-9 | 3-Methylphenol & 4-Methylphenol | 1200 | U | | U |
| 93951-73-6 | 2-Chlorophenol-d4 | 1400 | | | |
| 2199-69-1 | 1,2-Dichlorobenzene-d4 | 910 | | | |
| 111-91-1 | bis(2-Chloroethoxy)methane | 400 | U | | U |
| 111-44-4 | bis(2-Chloroethyl) ether | 400 | U | | U |
| 108-60-1 | bis(2-Chloroisopropyl) ether | 400 | U | | U |
| 117-81-7 | bis(2-Ethylhexyl) phthalate | 400 | U | | U |
| 101-55-3 | 4-Bromophenyl phenyl ether | 400 | U | | U |
| 56-55-3 | Benz(a)anthracene | 400 | U | | U |
| 85-68-7 | Butyl benzyl phthalate | 400 | U | | U |
| 208-96-8 | Acenaphthylene | 400 | U | | U |
| 106-47-8 | 4-Chloroaniline | 400 | U | | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 400 | U | | U |
| 91-58-7 | 2-Chloronaphthalene | 400 | U | | U |
| 95-57-8 | 2-Chlorophenol | 400 | U | | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 400 | U | | U |

| CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|
| 218-01-9 | Chrysene | 400 | U | | U |
| 53-70-3 | Dibenz(a,h)anthracene | 400 | U | | U |
| 132-64-9 | Dibenzofuran | 400 | U | | U |
| 84-74-2 | Di-n-butyl phthalate | 400 | U | | U |
| 95-50-1 | 1,2-Dichlorobenzene | 400 | U | | U |
| 541-73-1 | 1,3-Dichlorobenzene | 400 | U | | U |
| 106-46-7 | 1,4-Dichlorobenzene | 400 | U | | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1900 | U | | U |
| 120-83-2 | 2,4-Dichlorophenol | 400 | U | | U |
| 7440-36-0 | Antimony | 1.8 | U | | U |
| 7439-89-6 | Iron | 21500 | | | |
| 7439-92-1 | Lead | 21.5 | | | |
| 7439-95-4 | Magnesium | 8480 | | | |
| 7440-39-3 | Barium | 130 | | | |
| 7440-02-0 | Nickel | 11.4 | | | |
| 7440-09-7 | Potassium | 1390 | | | |
| 7440-41-7 | Beryllium | 0.89 | | | |
| 7782-49-2 | Selenium | 2.5 | U | | U |
| 7440-22-4 | Silver | 0.62 | U | | U |
| 7440-23-5 | Sodium | 45.7 | B | | B |
| 7440-28-0 | Thallium | 2.5 | U | | U |
| 7440-62-2 | Vanadium | 36.4 | | | |
| 7440-66-6 | Zinc | 54.1 | | | |
| 7440-47-3 | Chromium | 27 | | | |
| 7440-43-9 | Cadmium | 0.37 | U | | U |
| 7440-70-2 | Calcium | 11200 | | | |
| 7440-48-4 | Cobalt | 10.7 | | | |
| 7440-50-8 | Copper | 14.1 | | | |
| 7429-90-5 | Aluminum | 14200 | | | |
| 7440-38-2 | Arsenic | 3.9 | | | |
| 7439-96-5 | Manganese | 769 | | | |
| 99-65-0 | 1,3-Dinitrobenzene | 0.25 | U | | U |
| 121-14-2 | 2,4-Dinitrotoluene | 0.25 | U | | U |
| 606-20-2 | 2,6-Dinitrotoluene | 1.2 | U | | U |
| 98-95-3 | Nitrobenzene | 0.25 | U | | U |
| 55-63-0 | Nitroglycerin | 0.50 | U | | U |
| 99-35-4 | 1,3,5-Trinitrobenzene | 0.25 | U | | U |
| 118-96-7 | 2,4,6-Trinitrotoluene | 0.25 | U | | U |
| 2691-41-0 | HMX | 0.25 | U | | U |
| 121-82-4 | RDX | 0.25 | U | | U |
| 479-45-8 | Tetryl | 0.25 | U | | U |
| 88-72-2 | 2-Nitrotoluene | 0.25 | U | | U |
| 99-08-1 | 3-Nitrotoluene | 0.25 | U | | U |
| 99-99-0 | 4-Nitrotoluene | 0.50 | U | | U |
| 19406-51-0 | 4-Amino-2,6-dinitrotoluene | 0.25 | U | | U |
| 35572-78-2 | 2-Amino-4,6-dinitrotoluene | 0.25 | U | | U |
| 610-39-9 | 3,4-Dinitrotoluene | 0.45 | | | |
| 78-11-5 | PETN | 0.50 | U | | U |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| -- | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.011 | 0.049 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 13 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.01 | 0.4 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.17 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.82 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.27 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.3 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.34 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.42 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.24 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.15 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 1.6 | 21 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.27 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.41 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.2 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.21 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 25 | 83 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.01 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.01 | 0.25 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.41 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.26 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.32 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.27 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.5 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.83 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 1.5 | 22 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.38 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.82 | 11 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.93 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.29 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.34 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.75 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.67 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.67 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.4 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.49 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.66 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.4 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.36 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.9 | NA | NA | PP01 | Y | T | D | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 0.9 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.9 | 0.9 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.59 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 1.5 | 11 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 1 | 11 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.9 | 0.44 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.95 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.54 | 11 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.59 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.32 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.23 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.5 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.29 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.55 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.32 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.81 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.29 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.98 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.42 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.66 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 0.9 | 0.71 | 5.5 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 210 | 610 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 2500 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 260 | 2500 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 76 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 71 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 210 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 93 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 340 | 2500 | PP01 | N | T | D | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 140 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 360 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 140 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 63 | 2500 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 210 | 630 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 410 | 1200 | PP01 | N | T | D | 19 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 97 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 71 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 130 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 92 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 96 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 95 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 120 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1 | 110 | 410 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.86 | 2.6 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 3.8 | 12.3 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 9.2 | 61.4 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.49 | 2.5 | PP01 | N | T | D | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 30.7 | 123 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 30.7 | 614 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.61 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.74 | 3.7 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 30.7 | 123 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.25 | 0.74 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.61 | 3.1 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 8.6 | 25.8 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 19 |
| MG/KG | 0.99 | 0.004 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.005 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.007 | 1.2 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.017 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.015 | 0.50 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.009 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.019 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.012 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.012 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.009 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.013 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.015 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.018 | 0.50 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.009 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.012 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | NA | NA | PP01 | Y | T | W | 19 |
| MG/KG | 0.99 | 0.025 | 0.50 | PP01 | N | T | W | 19 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| -- | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.011 | 0.049 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 13 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 10 | 41 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.01 | 0.4 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.17 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.82 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.27 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.3 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.34 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.42 | 4.2 | PP01 | N | T | D | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 1.01 | 0.24 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.15 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 1.6 | 21 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.27 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.41 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.2 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.21 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 25 | 83 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.01 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.01 | 0.25 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.41 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.26 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.32 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.27 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 1.01 | 0.5 | 4.2 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.88 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 1.6 | 23 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.4 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.86 | 12 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.98 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.3 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.36 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.79 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.71 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.71 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.42 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.51 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.7 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.42 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.39 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.95 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.95 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.95 | 0.95 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.62 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 1.6 | 12 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 1.1 | 12 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.95 | 0.47 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 1 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.57 | 12 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.62 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.34 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.25 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.53 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.3 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.58 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.34 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.85 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.3 | 5.8 | PP01 | N | T | D | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 0.95 | 1 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.44 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.7 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 0.95 | 0.75 | 5.8 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 210 | 630 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 2500 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 270 | 2500 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.02 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 78 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 73 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 210 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 95 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 350 | 2500 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 140 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 360 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 140 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 64 | 2500 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 210 | 640 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.02 | NA | NA | PP01 | Y | T | D | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 1.02 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 410 | 1300 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.02 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 99 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 73 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 100 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 130 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 94 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 98 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 96 | 410 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 120 | 2000 | PP01 | N | T | D | 19 |
| UG/KG | 1.02 | 110 | 410 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.86 | 2.6 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 3.8 | 12.3 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 9.2 | 61.4 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.49 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 30.7 | 123 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 30.7 | 614 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.61 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.74 | 3.7 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 30.7 | 123 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.25 | 0.74 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.61 | 3.1 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 8.6 | 25.8 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.004 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.005 | 0.25 | PP01 | N | T | W | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| MG/KG | 1 | 0.007 | 1.2 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.018 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.015 | 0.50 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.01 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.019 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.012 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.012 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.01 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.013 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.016 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.018 | 0.50 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.01 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.012 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 1 | NA | NA | PP01 | Y | T | W | 19 |
| MG/KG | 1 | 0.025 | 0.50 | PP01 | N | T | W | 19 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| -- | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| MG/KG | 1 | 0.011 | 0.049 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 10 | 40 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 13 | 40 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 10 | 40 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 10 | 40 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 10 | 40 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 10 | 40 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 10 | 40 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | 0.39 | 4.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.17 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.8 | 4.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.27 | 4.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.29 | 4.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.33 | 4.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.41 | 4.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.23 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.14 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 1.6 | 21 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.27 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.4 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.19 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.21 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 25 | 81 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | 0.24 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.4 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.25 | 2.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.31 | 4.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.27 | 4.1 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 0.48 | 4.1 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.96 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 1.8 | 26 | PP01 | N | T | D | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 1.04 | 0.44 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.95 | 13 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 1.1 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.33 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.4 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.87 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.78 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.78 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.46 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.56 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.77 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.46 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.42 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.04 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.04 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.04 | 1 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.68 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 1.8 | 13 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 1.2 | 13 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 1.04 | 0.51 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 1.1 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.63 | 13 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.68 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.37 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.27 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.58 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.33 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.64 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.37 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.94 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.33 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 1.1 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.49 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.77 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 1.04 | 0.82 | 6.4 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 200 | 600 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 120 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 98 | 2400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 260 | 2400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 120 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 99 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 75 | 1900 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 98 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 120 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 70 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 99 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 1900 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 200 | 1900 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 1900 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 92 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 99 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 340 | 2400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 140 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 350 | 1900 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 130 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 62 | 2400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 210 | 620 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 400 | 1200 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | NA | NA | PP01 | Y | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 98 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 95 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 120 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 70 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 98 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 120 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 100 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 120 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 91 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 94 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 93 | 400 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 1900 | PP01 | N | T | D | 19 |
| UG/KG | 0.98 | 110 | 400 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.62 | 1.8 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 3.8 | 12.3 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 9.2 | 61.6 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.49 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 30.8 | 123 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.12 | 0.62 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 30.8 | 616 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.62 | 2.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.74 | 3.7 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 30.8 | 123 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.25 | 0.74 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.62 | 3.1 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 8.6 | 25.9 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.86 | 2.6 | PP01 | N | T | D | 19 |
| MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 19 |
| MG/KG | 0.99 | 0.004 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.005 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.007 | 1.2 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.017 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.015 | 0.50 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.009 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.019 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.012 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.012 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.009 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.013 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.015 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.018 | 0.50 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.009 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | 0.012 | 0.25 | PP01 | N | T | W | 19 |
| MG/KG | 0.99 | NA | NA | PP01 | Y | T | W | 19 |
| MG/KG | 0.99 | 0.025 | 0.50 | PP01 | N | T | W | 19 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC02 SSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC03 SSP-SW-21 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC04 SSP-SW-33 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC05 SSP-SW-36 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC06 SSP-SW-25 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC07 SSP-FL-1M 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC07 SSP-FL-1M 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC07 SSP-FL-1M 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC07 SSP-FL-1M 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC07 SSP-FL-1M 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC07 SSP-FL-1M 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC07 SSP-FL-1M 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC07 SSP-FL-1M 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC07 SSP-FL-1M 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC09 SSP-FL-3O 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC10 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC01 SSP-FL-3F 1-2' | 1.0 | 2.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC11 SSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC12 SSP-FL-4A 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC13 SSP-FL-3L 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC14 NSP-SW-11 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC15 NSP-SW-1S 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC16 NSP-SW-22 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC17 NSP-FL-1G 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC18 NSP-FL-2K 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC19 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39TMSC02 NSP-FL-3E 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC20 NSP-FL-2H 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC21 NSP-SW-28 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |

SWMU 39
Metals Confirmations

| Site | Location | Field Id | Depth Top | Depth Bottom | Lab Name | SDG |
|---|---|---|---|---|---|---|
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC22 NSP-FL-5D 0-1' | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC01 SSP-SW-1 0-1 DUP | 0.0 | 1.0 | TAWS | G9D280272 |
| RFAAP | SWMU 39 | 39SC23 | 0.0 | 1.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC23 | 0.0 | 1.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC23 | 0.0 | 1.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC23 | 0.0 | 1.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC24 | 1.0 | 2.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC24 | 1.0 | 2.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC24 | 1.0 | 2.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC24 | 1.0 | 2.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC25 | 2.0 | 3.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC25 | 2.0 | 3.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC25 | 2.0 | 3.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC25 | 2.0 | 3.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | MMDDYYR1 | 0.0 | 1.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | MMDDYYR1 | 0.0 | 1.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | MMDDYYR1 | 0.0 | 1.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | MMDDYYR1 | 0.0 | 1.0 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC26 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC26 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC26 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC26 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39TMSC03 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39TMSC03 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39TMSC03 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39TMSC03 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC27 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC27 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC27 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | 39SC27 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | MMDDYYR2 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | MMDDYYR2 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | MMDDYYR2 | 1.0 | 1.5 | TAWS | G9E280195 |
| RFAAP | SWMU 39 | MMDDYYR2 | 1.0 | 1.5 | TAWS | G9E280195 |

SWMU 39
Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | D2216-90 | D 2216-90 | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 7471A | 7471A | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC01 SSP-SW-1 0-1 | SO | G9D280272001 | 3050B | 6010B | 04/14/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | D2216-90 | D 2216-90 | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 7471A | 7471A | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC02 SSP-SW-11 0-1' | SO | G9D280272002 | 3050B | 6010B | 04/08/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | D2216-90 | D 2216-90 | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 7471A | 7471A | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |

SWMU 39
Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC03 SSP-SW-21 0-1' | SO | G9D280272003 | 3050B | 6010B | 04/21/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | D2216-90 | D 2216-90 | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 7471A | 7471A | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC04 SSP-SW-33 0-1' | SO | G9D280272004 | 3050B | 6010B | 04/22/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | D2216-90 | D 2216-90 | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 7471A | 7471A | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |

SWMU 39
Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC05 SSP-SW-36 1-2' | SO | G9D280272005 | 3050B | 6010B | 04/23/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | D2216-90 | D 2216-90 | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 7471A | 7471A | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC06 SSP-SW-25 0-1' | SO | G9D280272006 | 3050B | 6010B | 04/22/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | D2216-90 | D 2216-90 | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 7471A | 7471A | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |

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Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC07 SSP-FL-1M 0-1' | SO | G9D280272007 | 3050B | 6010B | 04/16/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | D2216-90 | D 2216-90 | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 7471A | 7471A | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC08 SSP-FL-2C 1-2' | SO | G9D280272008 | 3050B | 6010B | 04/21/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | D2216-90 | D 2216-90 | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 7471A | 7471A | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |

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Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC09 SSP-FL-3O 0-1' | SO | G9D280272009 | 3050B | 6010B | 04/14/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | D2216-90 | D 2216-90 | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 7471A | 7471A | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39SC10 SSP-FL-3F 1-2' | SO | G9D280272010 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | D2216-90 | D 2216-90 | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 7471A | 7471A | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |

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Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39TMSC01 SSP-FL-3F 1-2' | SO | G9D280272011 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | D2216-90 | D 2216-90 | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 7471A | 7471A | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC11 SSP-FL-2H 0-1' | SO | G9D280272012 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | D2216-90 | D 2216-90 | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 7471A | 7471A | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |

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Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC12 SSP-FL-4A 0-1' | SO | G9D280272013 | 3050B | 6010B | 04/21/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | D2216-90 | D 2216-90 | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 7471A | 7471A | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC13 SSP-FL-3L 0-1' | SO | G9D280272014 | 3050B | 6010B | 04/15/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | D2216-90 | D 2216-90 | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 7471A | 7471A | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |

SWMU 39
Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC14 NSP-SW-11 0-1' | SO | G9D280272015 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | D2216-90 | D 2216-90 | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 7471A | 7471A | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC15 NSP-SW-1S 0-1' | SO | G9D280272016 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | D2216-90 | D 2216-90 | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 7471A | 7471A | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |
| 39SC16 NSP-SW-22 0-1' | SO | G9D280272017 | 3050B | 6010B | 04/13/09 |

SWMU 39
Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | D2216-90 | D 2216-90 | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 7471A | 7471A | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC17 NSP-FL-1G 0-1' | SO | G9D280272018 | 3050B | 6010B | 04/09/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | D2216-90 | D 2216-90 | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 7471A | 7471A | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC18 NSP-FL-2K 0-1' | SO | G9D280272019 | 3050B | 6010B | 04/13/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | D2216-90 | D 2216-90 | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 7471A | 7471A | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |

SWMU 39
Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39SC19 NSP-FL-3E 0-1' | SO | G9D280272020 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | D2216-90 | D 2216-90 | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 7471A | 7471A | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39TMSC02 NSP-FL-3E 0-1' | SO | G9D280272021 | 3050B | 6010B | 04/14/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | D2216-90 | D 2216-90 | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 7471A | 7471A | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |

SWMU 39
Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC20 NSP-FL-2H 0-1' | SO | G9D280272022 | 3050B | 6010B | 04/13/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | D2216-90 | D 2216-90 | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 7471A | 7471A | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC21 NSP-SW-28 0-1' | SO | G9D280272023 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | D2216-90 | D 2216-90 | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 7471A | 7471A | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |

SWMU 39
Metals Confirmations

| Field Id | Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date |
|---|---|---|---|---|---|
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC22 NSP-FL-5D 0-1' | SO | G9D280272024 | 3050B | 6010B | 04/23/09 |
| 39SC01 SSP-SW-1 0-1 DUP | SO | G9D280272001 | D2216-90 | D 2216-90 | 04/14/09 |
| 39SC23 | SO | G9E280195001 | D2216-90 | D 2216-90 | 04/28/09 |
| 39SC23 | SO | G9E280195001 | 3050B | 6010B | 04/28/09 |
| 39SC23 | SO | G9E280195001 | 3050B | 6010B | 04/28/09 |
| 39SC23 | SO | G9E280195001 | 3050B | 6010B | 04/28/09 |
| 39SC24 | SO | G9E280195002 | D2216-90 | D 2216-90 | 04/28/09 |
| 39SC24 | SO | G9E280195002 | 3050B | 6010B | 04/28/09 |
| 39SC24 | SO | G9E280195002 | 3050B | 6010B | 04/28/09 |
| 39SC24 | SO | G9E280195002 | 3050B | 6010B | 04/28/09 |
| 39SC25 | SO | G9E280195003 | D2216-90 | D 2216-90 | 05/13/09 |
| 39SC25 | SO | G9E280195003 | 3050B | 6010B | 05/13/09 |
| 39SC25 | SO | G9E280195003 | 3050B | 6010B | 05/13/09 |
| 39SC25 | SO | G9E280195003 | 3050B | 6010B | 05/13/09 |
| MMDDYYR1 | SO | G9E280195004 | D2216-90 | D 2216-90 | 04/13/09 |
| MMDDYYR1 | SO | G9E280195004 | 3050B | 6010B | 04/13/09 |
| MMDDYYR1 | SO | G9E280195004 | 3050B | 6010B | 04/13/09 |
| MMDDYYR1 | SO | G9E280195004 | 3050B | 6010B | 04/13/09 |
| 39SC26 | SO | G9E280195005 | D2216-90 | D 2216-90 | 05/27/09 |
| 39SC26 | SO | G9E280195005 | 3050B | 6010B | 05/27/09 |
| 39SC26 | SO | G9E280195005 | 3050B | 6010B | 05/27/09 |
| 39SC26 | SO | G9E280195005 | 3050B | 6010B | 05/27/09 |
| 39TMSC03 | SO | G9E280195006 | D2216-90 | D 2216-90 | 05/27/09 |
| 39TMSC03 | SO | G9E280195006 | 3050B | 6010B | 05/27/09 |
| 39TMSC03 | SO | G9E280195006 | 3050B | 6010B | 05/27/09 |
| 39TMSC03 | SO | G9E280195006 | 3050B | 6010B | 05/27/09 |
| 39SC27 | SO | G9E280195007 | D2216-90 | D 2216-90 | 05/27/09 |
| 39SC27 | SO | G9E280195007 | 3050B | 6010B | 05/27/09 |
| 39SC27 | SO | G9E280195007 | 3050B | 6010B | 05/27/09 |
| 39SC27 | SO | G9E280195007 | 3050B | 6010B | 05/27/09 |
| MMDDYYR2 | SO | G9E280195008 | D2216-90 | D 2216-90 | 05/27/09 |
| MMDDYYR2 | SO | G9E280195008 | 3050B | 6010B | 05/27/09 |
| MMDDYYR2 | SO | G9E280195008 | 3050B | 6010B | 05/27/09 |
| MMDDYYR2 | SO | G9E280195008 | 3050B | 6010B | 05/27/09 |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 18.9 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.027 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.9 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.99 | B | L |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-38-2 | Arsenic | 2.8 | B | L |
| 04/28/09 | 04/30/09 | 05/05/09 | 7439-89-6 | Iron | 21100 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7439-92-1 | Lead | 18.1 | | L |
| 04/28/09 | 04/30/09 | 05/05/09 | 7439-95-4 | Magnesium | 2790 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7439-96-5 | Manganese | 963 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-39-3 | Barium | 159 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-02-0 | Nickel | 13.2 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-09-7 | Potassium | 1210 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-41-7 | Beryllium | 1.0 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7782-49-2 | Selenium | 4.9 | U | UL |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-22-4 | Silver | 1.2 | U | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-23-5 | Sodium | 1230 | U | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-62-2 | Vanadium | 39.2 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-66-6 | Zinc | 54.5 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-47-3 | Chromium | 24.8 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-43-9 | Cadmium | 0.74 | U | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-70-2 | Calcium | 1410 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-48-4 | Cobalt | 13.6 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7440-50-8 | Copper | 11.4 | | |
| 04/28/09 | 04/30/09 | 05/05/09 | 7429-90-5 | Aluminum | 15700 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 14.7 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.039 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 5.3 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 20400 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 16.6 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 2040 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 951 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 90.3 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 10.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1120 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.68 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.3 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.59 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 31.1 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 2.3 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 37.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 19.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.35 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 629 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 10.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 13700 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 51.6 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 18.6 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.055 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 28500 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 83.6 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3620 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 285 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 106 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 15.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1720 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.93 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.5 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.61 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 40.9 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 2.5 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 54.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 30.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.37 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 979 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 13.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 25.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 20800 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-38-2 | Arsenic | 3.6 | | L |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 59.6 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 17.4 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.030 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.5 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 21000 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 50.9 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 2730 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 345 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 108 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 12.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1510 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.85 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.61 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 49.8 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 1.0 | B | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 40.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 28.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 1420 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 14.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 15900 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 55.1 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 16.8 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.049 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.9 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 17600 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 13.1 | | L |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 1780 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 763 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 103 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 10.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 948 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.82 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.60 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 40.3 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.78 | B | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 36.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 20.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 809 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 9.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 15200 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 45.2 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 18.1 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.037 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 26100 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 99.8 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3390 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 149 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 88.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 15.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1990 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.95 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.61 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 37.3 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.63 | B | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 49.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 27.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.37 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 520 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 29.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 18200 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-38-2 | Arsenic | 2.7 | | L |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 55.5 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 19.4 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.051 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.9 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 5.1 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 35100 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 15.1 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 4470 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 631 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 103 | | |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 19.3 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2010 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 1.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.5 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.62 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 60.9 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 1.2 | B | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 66.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 40.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.37 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 1090 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 13.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 24.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 25100 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 71.4 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 19.9 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.054 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.9 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 4.4 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 34100 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 16.1 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 4300 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 129 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 129 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 19.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1770 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 1.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.5 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.62 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 110 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.93 | B | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 67.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 39.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.37 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 1170 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 9.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 24.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 28700 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 84.7 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 13.7 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.019 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.7 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 14900 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 13.4 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 1470 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 475 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 99.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 10.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 664 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.73 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.3 | U | UL |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.58 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 29.9 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 2.3 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 26.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 23.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.35 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 358 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 17.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 8.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 9460 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-38-2 | Arsenic | 2.7 | | L |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 32.5 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 17.5 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.035 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.7 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 38100 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 11.5 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3650 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 418 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 72.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 19.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2240 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 1.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.61 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 42.9 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 1.3 | B | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 61.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 45.5 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 656 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 15.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 21.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 23800 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 63.4 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 17.3 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.033 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.8 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 31100 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 10.9 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3690 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 374 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 66.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 16.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2070 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.91 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.60 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 38.4 | B | J |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 1.1 | B | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 52.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 30.8 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 556 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 15.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 19.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 19300 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 58.0 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 17.2 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.024 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 25900 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 14.5 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 2920 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 213 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 76.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 14.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1620 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.99 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.60 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 41.0 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 49.3 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 27.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 748 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 13.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 17.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 19700 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-38-2 | Arsenic | 3.3 | | L |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 58.1 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 17.7 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.049 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.6 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 29500 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 27.8 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 4060 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 492 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 91.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 16.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1870 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 1.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.61 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 44.9 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.79 | B | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 55.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 28.0 | | |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 902 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 15.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 25.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 20500 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 60.2 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 21.5 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.049 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.9 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 12.3 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 50400 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 95.5 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3250 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 3850 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 194 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 21.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2270 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 1.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.5 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.64 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 44.6 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 1.5 | B | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 77.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 35.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.40 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 906 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 30.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 39.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 28000 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 117 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 12.5 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.028 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.7 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.3 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 22900 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 10.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 2610 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 432 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 58.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 11.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1370 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.87 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.3 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.57 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 44.7 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.58 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 39.3 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 20.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.34 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 608 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 10.0 | | |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 14.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 13900 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 44.8 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 14.2 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.037 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.7 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.4 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 30200 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 23.3 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 4380 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 589 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 91.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 16.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1860 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.91 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.3 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.58 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 50.4 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 1.5 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 56.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 32.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.35 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 1090 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 14.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 19.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 21300 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 64.4 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 16.1 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.029 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.6 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 26800 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 19.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3880 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 519 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 88.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 15.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2280 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.91 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.60 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 44.2 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 1.2 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 50.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 26.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 712 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 20.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 18500 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 55.0 | | |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 14.4 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.030 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 2.9 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 26100 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 178 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3400 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 368 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 81.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 14.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 1860 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.90 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.3 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.58 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 38.3 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 2.3 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 48.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 24.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.35 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 494 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 13.3 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 149 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 17800 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 51.9 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 16.3 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.031 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 25800 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 55.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3810 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 475 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 72.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 13.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2060 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.94 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.60 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 42.5 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.68 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 46.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 24.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 730 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.3 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 26.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 16800 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-38-2 | Arsenic | 3.2 | | L |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 53.1 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 16.6 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.027 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 27300 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 11.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 4170 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 529 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 93.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 15.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2400 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.91 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.60 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 48.6 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.96 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 50.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 24.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 790 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 18.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 17900 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-38-2 | Arsenic | 2.0 | B | J |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 55.9 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 17.1 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.032 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.8 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 27600 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 11.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 4140 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 527 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 95.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 16.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2450 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.89 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.60 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 46.7 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 1.3 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 50.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 26.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 781 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.9 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 21.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 18200 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 57.7 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 17.6 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.031 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 26700 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 119 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3600 | | |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 444 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 87.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 14.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2030 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.89 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.61 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 42.6 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 2.4 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 48.1 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 24.3 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 694 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 54.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 17300 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-38-2 | Arsenic | 2.4 | B | L |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 51.5 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 17.9 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.050 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 5.0 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 31100 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 203 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 4130 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 537 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 83.2 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 17.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2110 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 1.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.61 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 46.1 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.77 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 58.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 32.0 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.37 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 793 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 13.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 56.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 20600 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 59.3 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 17.7 | | |
| 04/28/09 | 04/30/09 | 05/01/09 | 7439-97-6 | Mercury | 0.041 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-36-0 | Antimony | 1.8 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-38-2 | Arsenic | 3.3 | | L |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-89-6 | Iron | 28200 | | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-92-1 | Lead | 115 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-95-4 | Magnesium | 3860 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7439-96-5 | Manganese | 350 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-39-3 | Barium | 78.5 | | |

SWMU 39
Metals Confirmations

| Receipt Date | Prep Date | Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier |
|---|---|---|---|---|---|---|---|
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-02-0 | Nickel | 16.5 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-09-7 | Potassium | 2170 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-41-7 | Beryllium | 0.94 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7782-49-2 | Selenium | 2.4 | U | UL |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-22-4 | Silver | 0.61 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-23-5 | Sodium | 47.4 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-28-0 | Thallium | 0.77 | B | J |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-62-2 | Vanadium | 51.8 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-47-3 | Chromium | 27.4 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-43-9 | Cadmium | 0.36 | U | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-70-2 | Calcium | 608 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-48-4 | Cobalt | 11.7 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7440-50-8 | Copper | 69.6 | | |
| 04/28/09 | 04/30/09 | 05/04/09 | 7429-90-5 | Aluminum | 19700 | | |
| 04/28/09 | 04/30/09 | 05/06/09 | 7440-66-6 | Zinc | 55.8 | | |
| 04/28/09 | 04/29/09 | 04/30/09 | Q1028 | Percent Moisture | 18.4 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | Q1028 | Percent Moisture | 13.4 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7439-92-1 | Lead | 11.4 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-62-2 | Vanadium | 52.2 | | |
| 05/28/09 | 06/01/09 | 06/03/09 | 7440-38-2 | Arsenic | 4.3 | | L |
| 05/28/09 | 06/01/09 | 06/02/09 | Q1028 | Percent Moisture | 17.3 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-38-2 | Arsenic | 3.4 | | L |
| 05/28/09 | 06/01/09 | 06/02/09 | 7439-92-1 | Lead | 10.0 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-62-2 | Vanadium | 52.5 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | Q1028 | Percent Moisture | 5.8 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-38-2 | Arsenic | 1.8 | B | L |
| 05/28/09 | 06/01/09 | 06/02/09 | 7439-92-1 | Lead | 9.1 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-62-2 | Vanadium | 21.4 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | Q1028 | Percent Moisture | 12.2 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-38-2 | Arsenic | 3.3 | | L |
| 05/28/09 | 06/01/09 | 06/02/09 | 7439-92-1 | Lead | 25.8 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-62-2 | Vanadium | 44.3 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | Q1028 | Percent Moisture | 29.0 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-38-2 | Arsenic | 2.4 | B | L |
| 05/28/09 | 06/01/09 | 06/02/09 | 7439-92-1 | Lead | 16.3 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-62-2 | Vanadium | 32.9 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | Q1028 | Percent Moisture | 27.2 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-38-2 | Arsenic | 2.4 | B | L |
| 05/28/09 | 06/01/09 | 06/02/09 | 7439-92-1 | Lead | 14.4 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-62-2 | Vanadium | 33.9 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | Q1028 | Percent Moisture | 33.4 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-38-2 | Arsenic | 1.7 | B | L |
| 05/28/09 | 06/01/09 | 06/02/09 | 7439-92-1 | Lead | 219 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-62-2 | Vanadium | 23.7 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | Q1028 | Percent Moisture | 31.6 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-38-2 | Arsenic | 1.4 | B | L |
| 05/28/09 | 06/01/09 | 06/02/09 | 7439-92-1 | Lead | 202 | | |
| 05/28/09 | 06/01/09 | 06/02/09 | 7440-62-2 | Vanadium | 21.3 | | |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| J | MG/KG | 1 | 0.011 | 0.049 | PP01 | N | T | D | 19 |
| UL | MG/KG | 1 | 0.62 | 1.9 | PP01 | N | T | D | 19 |
| L | MG/KG | 1 | 0.62 | 2.5 | PP01 | N | T | D | 19 |
| L | MG/KG | 2 | 1.7 | 5.2 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 7.6 | 24.7 | PP01 | N | T | D | 19 |
| L | MG/KG | 2 | 1.5 | 4.9 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 18.5 | 123 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 0.99 | 3.0 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 0.99 | 4.9 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 61.7 | 247 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 0.25 | 0.74 | PP01 | N | T | D | 19 |
| UL | MG/KG | 2 | 1.5 | 4.9 | PP01 | N | T | D | 19 |
| U | MG/KG | 2 | 0.25 | 1.2 | PP01 | N | T | D | 19 |
| U | MG/KG | 2 | 61.7 | 1230 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 1.5 | 7.4 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 0.99 | 3.0 | PP01 | N | T | D | 19 |
| U | MG/KG | 2 | 0.25 | 0.74 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 61.7 | 247 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 0.49 | 1.5 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 1.2 | 6.2 | PP01 | N | T | D | 19 |
| | MG/KG | 2 | 17.3 | 51.8 | PP01 | N | T | D | 19 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 15 |
| J | MG/KG | 1 | 0.010 | 0.047 | PP01 | N | T | D | 15 |
| UL | MG/KG | 1 | 0.59 | 1.8 | PP01 | N | T | D | 15 |
| L | MG/KG | 1 | 0.82 | 2.5 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 3.6 | 11.7 | PP01 | N | T | D | 15 |
| L | MG/KG | 1 | 0.70 | 2.3 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 8.8 | 58.6 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 0.47 | 1.4 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 0.47 | 2.3 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 0.35 | 1.2 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 29.3 | 117 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 0.12 | 0.35 | PP01 | N | T | D | 15 |
| UL | MG/KG | 1 | 0.70 | 2.3 | PP01 | N | T | D | 15 |
| U | MG/KG | 1 | 0.12 | 0.59 | PP01 | N | T | D | 15 |
| J | MG/KG | 1 | 29.3 | 586 | PP01 | N | T | D | 15 |
| UL | MG/KG | 1 | 0.59 | 2.3 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 0.35 | 1.2 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 0.47 | 1.4 | PP01 | N | T | D | 15 |
| U | MG/KG | 1 | 0.12 | 0.35 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 29.3 | 117 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 0.23 | 0.70 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 0.59 | 2.9 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 8.2 | 24.6 | PP01 | N | T | D | 15 |
| | MG/KG | 1 | 0.70 | 3.5 | PP01 | N | T | D | 15 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| | MG/KG | 1 | 0.011 | 0.049 | PP01 | N | T | D | 19 |
| UL | MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 19 |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| | MG/KG | 1 | 3.8 | 12.3 | PP01 | N | T | D | 19 |
| L | MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 9.2 | 61.4 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.49 | 2.5 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 30.7 | 123 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| UL | MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| U | MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 19 |
| J | MG/KG | 1 | 30.7 | 614 | PP01 | N | T | D | 19 |
| UL | MG/KG | 1 | 0.61 | 2.5 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 19 |
| U | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 30.7 | 123 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.25 | 0.74 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.61 | 3.1 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 8.6 | 25.8 | PP01 | N | T | D | 19 |
| L | MG/KG | 1 | 0.86 | 2.6 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.74 | 3.7 | PP01 | N | T | D | 19 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| J | MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.85 | 2.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 3.8 | 12.1 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 9.1 | 60.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.3 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 30.3 | 605 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.61 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.5 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.3 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.24 | 0.73 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.61 | 3.0 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 8.5 | 25.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.73 | 3.6 | PP01 | N | T | D | 17 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| | MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.60 | 1.8 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.84 | 2.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 3.7 | 12 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 17 |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| | MG/KG | 1 | 9.0 | 60.1 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30 | 120 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 30 | 601 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.60 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30 | 120 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.24 | 0.72 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 8.4 | 25.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.72 | 3.6 | PP01 | N | T | D | 17 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| J | MG/KG | 1 | 0.010 | 0.049 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 3.8 | 12.2 | PP01 | N | T | D | 18 |
| L | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 9.2 | 61 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.5 | 122 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 30.5 | 610 | PP01 | N | T | D | 18 |
| L | MG/KG | 1 | 0.61 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.5 | 122 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.24 | 0.73 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.61 | 3.1 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 8.5 | 25.6 | PP01 | N | T | D | 18 |
| L | MG/KG | 1 | 0.85 | 2.6 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.73 | 3.7 | PP01 | N | T | D | 18 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 19 |
| | MG/KG | 1 | 0.011 | 0.05 | PP01 | N | T | D | 19 |
| UL | MG/KG | 1 | 0.62 | 1.9 | PP01 | N | T | D | 19 |
| L | MG/KG | 1 | 0.87 | 2.6 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 3.8 | 12.4 | PP01 | N | T | D | 19 |
| L | MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 9.3 | 62.1 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.50 | 1.5 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.50 | 2.5 | PP01 | N | T | D | 19 |

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 31 | 124 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| UL | MG/KG | 1 | 0.74 | 2.5 | PP01 | N | T | D | 19 |
| U | MG/KG | 1 | 0.12 | 0.62 | PP01 | N | T | D | 19 |
| J | MG/KG | 1 | 31 | 621 | PP01 | N | T | D | 19 |
| L | MG/KG | 1 | 0.62 | 2.5 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.50 | 1.5 | PP01 | N | T | D | 19 |
| U | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 31 | 124 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.25 | 0.74 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.62 | 3.1 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 8.7 | 26.1 | PP01 | N | T | D | 19 |
| | MG/KG | 1 | 0.74 | 3.7 | PP01 | N | T | D | 19 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 20 |
| | MG/KG | 1 | 0.011 | 0.05 | PP01 | N | T | D | 20 |
| UL | MG/KG | 1 | 0.62 | 1.9 | PP01 | N | T | D | 20 |
| L | MG/KG | 1 | 0.87 | 2.6 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 3.9 | 12.5 | PP01 | N | T | D | 20 |
| L | MG/KG | 1 | 0.75 | 2.5 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 9.4 | 62.4 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 0.50 | 1.5 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 0.50 | 2.5 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 31.2 | 125 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 20 |
| UL | MG/KG | 1 | 0.75 | 2.5 | PP01 | N | T | D | 20 |
| U | MG/KG | 1 | 0.12 | 0.62 | PP01 | N | T | D | 20 |
| J | MG/KG | 1 | 31.2 | 624 | PP01 | N | T | D | 20 |
| L | MG/KG | 1 | 0.62 | 2.5 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 0.50 | 1.5 | PP01 | N | T | D | 20 |
| U | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 31.2 | 125 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 0.25 | 0.75 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 0.62 | 3.1 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 8.7 | 26.2 | PP01 | N | T | D | 20 |
| | MG/KG | 1 | 0.75 | 3.7 | PP01 | N | T | D | 20 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 14 |
| J | MG/KG | 1 | 0.009 | 0.046 | PP01 | N | T | D | 14 |
| UL | MG/KG | 1 | 0.58 | 1.7 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 3.6 | 11.6 | PP01 | N | T | D | 14 |
| L | MG/KG | 1 | 0.70 | 2.3 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 8.7 | 57.9 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.46 | 1.4 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.46 | 2.3 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.35 | 1.2 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 29 | 116 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.12 | 0.35 | PP01 | N | T | D | 14 |
| UL | MG/KG | 1 | 0.70 | 2.3 | PP01 | N | T | D | 14 |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| U | MG/KG | 1 | 0.12 | 0.58 | PP01 | N | T | D | 14 |
| J | MG/KG | 1 | 29 | 579 | PP01 | N | T | D | 14 |
| UL | MG/KG | 1 | 0.58 | 2.3 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.35 | 1.2 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.46 | 1.4 | PP01 | N | T | D | 14 |
| U | MG/KG | 1 | 0.12 | 0.35 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 29 | 116 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.23 | 0.70 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.58 | 2.9 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 8.1 | 24.3 | PP01 | N | T | D | 14 |
| L | MG/KG | 1 | 0.81 | 2.4 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.70 | 3.5 | PP01 | N | T | D | 14 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| J | MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.85 | 2.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 3.8 | 12.1 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 9.1 | 60.6 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.3 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 30.3 | 606 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.61 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 0.48 | 1.5 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.3 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.24 | 0.73 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.61 | 3.0 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 8.5 | 25.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.73 | 3.6 | PP01 | N | T | D | 17 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| J | MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.60 | 1.8 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.85 | 2.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 3.7 | 12.1 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 9.1 | 60.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.2 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 30.2 | 605 | PP01 | N | T | D | 17 |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| L | MG/KG | 1 | 0.60 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 0.48 | 1.5 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.2 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.24 | 0.73 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 8.5 | 25.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.73 | 3.6 | PP01 | N | T | D | 17 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| J | MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.60 | 1.8 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 3.7 | 12.1 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 9.1 | 60.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.2 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 30.2 | 604 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.60 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.2 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.24 | 0.72 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 8.5 | 25.4 | PP01 | N | T | D | 17 |
| L | MG/KG | 1 | 0.85 | 2.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.72 | 3.6 | PP01 | N | T | D | 17 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| | MG/KG | 1 | 0.010 | 0.049 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 18 |
| L | MG/KG | 1 | 0.85 | 2.6 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 3.8 | 12.2 | PP01 | N | T | D | 18 |
| L | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 9.1 | 60.8 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.4 | 122 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 30.4 | 608 | PP01 | N | T | D | 18 |
| L | MG/KG | 1 | 0.61 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.4 | 122 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.24 | 0.73 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.61 | 3.0 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 8.5 | 25.5 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.73 | 3.6 | PP01 | N | T | D | 18 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 21 |
| J | MG/KG | 1 | 0.011 | 0.051 | PP01 | N | T | D | 21 |
| UL | MG/KG | 1 | 0.64 | 1.9 | PP01 | N | T | D | 21 |
| L | MG/KG | 1 | 0.89 | 2.7 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 3.9 | 12.7 | PP01 | N | T | D | 21 |
| L | MG/KG | 1 | 0.76 | 2.5 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 9.6 | 63.7 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.51 | 1.5 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.51 | 2.5 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.38 | 1.3 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 31.8 | 127 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.13 | 0.38 | PP01 | N | T | D | 21 |
| UL | MG/KG | 1 | 0.76 | 2.5 | PP01 | N | T | D | 21 |
| U | MG/KG | 1 | 0.13 | 0.64 | PP01 | N | T | D | 21 |
| J | MG/KG | 1 | 31.8 | 637 | PP01 | N | T | D | 21 |
| L | MG/KG | 1 | 0.64 | 2.5 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.38 | 1.3 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.51 | 1.5 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.13 | 0.38 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 31.8 | 127 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.25 | 0.76 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.64 | 3.2 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 8.9 | 26.7 | PP01 | N | T | D | 21 |
| | MG/KG | 1 | 0.76 | 3.8 | PP01 | N | T | D | 21 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 13 |
| J | MG/KG | 1 | 0.009 | 0.046 | PP01 | N | T | D | 13 |
| UL | MG/KG | 1 | 0.57 | 1.7 | PP01 | N | T | D | 13 |
| L | MG/KG | 1 | 0.80 | 2.4 | PP01 | N | T | D | 13 |
| J | MG/KG | 1 | 3.5 | 11.4 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.69 | 2.3 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 8.6 | 57.2 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.46 | 1.4 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.46 | 2.3 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.34 | 1.1 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 28.6 | 114 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.11 | 0.34 | PP01 | N | T | D | 13 |
| UL | MG/KG | 1 | 0.69 | 2.3 | PP01 | N | T | D | 13 |
| U | MG/KG | 1 | 0.11 | 0.57 | PP01 | N | T | D | 13 |
| J | MG/KG | 1 | 28.6 | 572 | PP01 | N | T | D | 13 |
| J | MG/KG | 1 | 0.57 | 2.3 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.34 | 1.1 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.46 | 1.4 | PP01 | N | T | D | 13 |
| U | MG/KG | 1 | 0.11 | 0.34 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 28.6 | 114 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.23 | 0.69 | PP01 | N | T | D | 13 |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| | MG/KG | 1 | 0.57 | 2.9 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 8.0 | 24 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.69 | 3.4 | PP01 | N | T | D | 13 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 14 |
| J | MG/KG | 1 | 0.010 | 0.047 | PP01 | N | T | D | 14 |
| UL | MG/KG | 1 | 0.58 | 1.7 | PP01 | N | T | D | 14 |
| L | MG/KG | 1 | 0.82 | 2.4 | PP01 | N | T | D | 14 |
| J | MG/KG | 1 | 3.6 | 11.6 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.70 | 2.3 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 8.7 | 58.2 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.47 | 1.4 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.47 | 2.3 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.35 | 1.2 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 29.1 | 116 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.12 | 0.35 | PP01 | N | T | D | 14 |
| UL | MG/KG | 1 | 0.70 | 2.3 | PP01 | N | T | D | 14 |
| U | MG/KG | 1 | 0.12 | 0.58 | PP01 | N | T | D | 14 |
| J | MG/KG | 1 | 29.1 | 582 | PP01 | N | T | D | 14 |
| J | MG/KG | 1 | 0.58 | 2.3 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.35 | 1.2 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.47 | 1.4 | PP01 | N | T | D | 14 |
| U | MG/KG | 1 | 0.12 | 0.35 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 29.1 | 116 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.23 | 0.70 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.58 | 2.9 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 8.2 | 24.5 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.70 | 3.5 | PP01 | N | T | D | 14 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 16 |
| J | MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 16 |
| UL | MG/KG | 1 | 0.60 | 1.8 | PP01 | N | T | D | 16 |
| L | MG/KG | 1 | 0.83 | 2.5 | PP01 | N | T | D | 16 |
| J | MG/KG | 1 | 3.7 | 11.9 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 8.9 | 59.6 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 29.8 | 119 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 16 |
| UL | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 16 |
| U | MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 16 |
| J | MG/KG | 1 | 29.8 | 596 | PP01 | N | T | D | 16 |
| J | MG/KG | 1 | 0.60 | 2.4 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 16 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 29.8 | 119 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.24 | 0.72 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 8.3 | 25 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.72 | 3.6 | PP01 | N | T | D | 16 |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 14 |
| J | MG/KG | 1 | 0.010 | 0.047 | PP01 | N | T | D | 14 |
| UL | MG/KG | 1 | 0.58 | 1.8 | PP01 | N | T | D | 14 |
| L | MG/KG | 1 | 0.82 | 2.5 | PP01 | N | T | D | 14 |
| J | MG/KG | 1 | 3.6 | 11.7 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.70 | 2.3 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 8.8 | 58.4 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.47 | 1.4 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.47 | 2.3 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.35 | 1.2 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 29.2 | 117 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.12 | 0.35 | PP01 | N | T | D | 14 |
| UL | MG/KG | 1 | 0.70 | 2.3 | PP01 | N | T | D | 14 |
| U | MG/KG | 1 | 0.12 | 0.58 | PP01 | N | T | D | 14 |
| J | MG/KG | 1 | 29.2 | 584 | PP01 | N | T | D | 14 |
| U | MG/KG | 1 | 0.58 | 2.3 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.35 | 1.2 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.47 | 1.4 | PP01 | N | T | D | 14 |
| U | MG/KG | 1 | 0.12 | 0.35 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 29.2 | 117 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.23 | 0.70 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.58 | 2.9 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 8.2 | 24.5 | PP01 | N | T | D | 14 |
| | MG/KG | 1 | 0.70 | 3.5 | PP01 | N | T | D | 14 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 16 |
| J | MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 16 |
| UL | MG/KG | 1 | 0.60 | 1.8 | PP01 | N | T | D | 16 |
| J | MG/KG | 1 | 3.7 | 12 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 9.0 | 59.8 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 29.9 | 120 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 16 |
| UL | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 16 |
| U | MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 16 |
| J | MG/KG | 1 | 29.9 | 598 | PP01 | N | T | D | 16 |
| J | MG/KG | 1 | 0.60 | 2.4 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 16 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 29.9 | 120 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.24 | 0.72 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 8.4 | 25.1 | PP01 | N | T | D | 16 |
| L | MG/KG | 1 | 0.84 | 2.5 | PP01 | N | T | D | 16 |
| | MG/KG | 1 | 0.72 | 3.6 | PP01 | N | T | D | 16 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| J | MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.60 | 1.8 | PP01 | N | T | D | 17 |

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| J | MG/KG | 1 | 3.7 | 12 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 9.0 | 60 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30 | 120 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 30 | 600 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 0.60 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30 | 120 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.24 | 0.72 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 8.4 | 25.2 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 0.84 | 2.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.72 | 3.6 | PP01 | N | T | D | 17 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| J | MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.60 | 1.8 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 0.84 | 2.5 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 3.7 | 12.1 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 9.0 | 60.3 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.2 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| UL | MG/KG | 1 | 0.72 | 2.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 30.2 | 603 | PP01 | N | T | D | 17 |
| J | MG/KG | 1 | 0.60 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.48 | 1.4 | PP01 | N | T | D | 17 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 30.2 | 121 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.24 | 0.72 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 8.4 | 25.3 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.72 | 3.6 | PP01 | N | T | D | 17 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| J | MG/KG | 1 | 0.010 | 0.049 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 3.8 | 12.1 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 9.1 | 60.7 | PP01 | N | T | D | 18 |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.3 | 121 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 30.3 | 607 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.61 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.3 | 121 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.24 | 0.73 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.61 | 3.0 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 8.5 | 25.5 | PP01 | N | T | D | 18 |
| L | MG/KG | 1 | 0.85 | 2.5 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.73 | 3.6 | PP01 | N | T | D | 18 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| | MG/KG | 1 | 0.010 | 0.049 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 18 |
| L | MG/KG | 1 | 0.85 | 2.6 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 3.8 | 12.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 9.1 | 60.9 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.5 | 122 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 30.5 | 609 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 0.61 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.5 | 122 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.24 | 0.73 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.61 | 3.0 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 8.5 | 25.6 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.73 | 3.7 | PP01 | N | T | D | 18 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| J | MG/KG | 1 | 0.010 | 0.049 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.61 | 1.8 | PP01 | N | T | D | 18 |
| L | MG/KG | 1 | 0.85 | 2.6 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 3.8 | 12.1 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 9.1 | 60.7 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 2.4 | PP01 | N | T | D | 18 |

SWMU 39
Metals Confirmations

| Combined Qualifier | Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|---|
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.4 | 121 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 18 |
| UL | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 30.4 | 607 | PP01 | N | T | D | 18 |
| J | MG/KG | 1 | 0.61 | 2.4 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.49 | 1.5 | PP01 | N | T | D | 18 |
| U | MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 30.4 | 121 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.24 | 0.73 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.61 | 3.0 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 8.5 | 25.5 | PP01 | N | T | D | 18 |
| | MG/KG | 1 | 0.73 | 3.6 | PP01 | N | T | D | 18 |
| | % | 1 | 0.1 | 0.1 | PD01 | N | T | W | 19 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 13 |
| | MG/KG | 1 | 0.69 | 2.3 | PP01 | N | T | D | 13 |
| | MG/KG | 1 | 0.35 | 1.2 | PP01 | N | T | D | 13 |
| L | MG/KG | 1 | 0.81 | 2.4 | PP01 | N | T | D | 13 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| L | MG/KG | 1 | 0.85 | 2.5 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.73 | 2.4 | PP01 | N | T | D | 17 |
| | MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 5.8 |
| L | MG/KG | 1 | 0.74 | 2.2 | PP01 | N | T | D | 5.8 |
| | MG/KG | 1 | 0.64 | 2.1 | PP01 | N | T | D | 5.8 |
| | MG/KG | 1 | 0.32 | 1.1 | PP01 | N | T | D | 5.8 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 12 |
| L | MG/KG | 1 | 0.80 | 2.4 | PP01 | N | T | D | 12 |
| | MG/KG | 1 | 0.68 | 2.3 | PP01 | N | T | D | 12 |
| | MG/KG | 1 | 0.34 | 1.1 | PP01 | N | T | D | 12 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 29 |
| L | MG/KG | 1 | 0.99 | 3.0 | PP01 | N | T | D | 29 |
| | MG/KG | 1 | 0.84 | 2.8 | PP01 | N | T | D | 29 |
| | MG/KG | 1 | 0.42 | 1.4 | PP01 | N | T | D | 29 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 27 |
| L | MG/KG | 1 | 0.96 | 2.9 | PP01 | N | T | D | 27 |
| | MG/KG | 1 | 0.82 | 2.7 | PP01 | N | T | D | 27 |
| | MG/KG | 1 | 0.41 | 1.4 | PP01 | N | T | D | 27 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 33 |
| L | MG/KG | 1 | 1.1 | 3.2 | PP01 | N | T | D | 33 |
| | MG/KG | 1 | 0.90 | 3.0 | PP01 | N | T | D | 33 |
| | MG/KG | 1 | 0.45 | 1.5 | PP01 | N | T | D | 33 |
| | % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 32 |
| L | MG/KG | 1 | 1.0 | 3.1 | PP01 | N | T | D | 32 |
| | MG/KG | 1 | 0.88 | 2.9 | PP01 | N | T | D | 32 |
| | MG/KG | 1 | 0.44 | 1.5 | PP01 | N | T | D | 32 |

# Appendix B-2

# Data Validation Reports

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Explosives
Test America Laboratories, Inc., SDG G9D010148

**DATE:** June 17, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at collected at Main Manufacturing Area at RFAAP for SWMU39 Removal Action on March 31, 2009. Solid samples were analyzed for explosives using USEPA SW-846 8330B. A total of three solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 39DW15 | G9D010148-001 | 39DW17 | G9D010148-003 |
| 39DW16 | G9D010148-002 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Blank Analysis |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | System Monitoring Compounds |
| | X | Laboratory Control Sample |
| | X | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| | X | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable.

Eric Malarek, Chemist

6/17/09
Date

**RFAAP VALIDATION REPORT**
**EXPLOSIVES REVIEW**
**SDG G9D010148**

**I-Holding Times and Preservation**

The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, explosive compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/31/09, the coolers were received by the primary laboratory (Test America) on 04/01/09 at 5.0°C, 5.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 03/31/09. For the solid samples, the explosives were extracted on 04/03/09 and analyzed on 04/07/09 and 04/08/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**

The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. No contaminants should be present in the blanks. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5x) the maximum amount for explosive target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 04/07/09 | G9D030000-288 | All target explosives <½MRL | NA | NA | None |

MRL = Method Reporting Limit
NA = Not Applicable

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5-point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. The DoD QSM specifies that the correlation coefficient must be ≥0.995 and/or the percent relative standard deviation (%RSD) must be ≤20%. All detects were qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For the explosives initial calibration performed on 09/27/08 on instrument LC10.i, all criteria were met for target explosives compounds. All compounds were determined using calibration factors with RSDs ≤20%. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this initial calibration.

- All explosives were non-detect; therefore, no confirmations were required on instrument LC9.i.

**IV-Continuing Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. Continuing calibration standards are analyzed after every 10 injections, and at the end of the analysis sequence. The DoD QSM specifies that the percent difference (%D) from initial calibration should be no greater than ±20%. All detects were qualified as estimated "J" for where there were exceeding %Ds, and all non-detects were qualified as estimated "UJ" for where there were grossly exceeding recoveries. Grossly exceeding is defined as twice the established criteria limits.

- For explosives initial calibration verification performed on 09/27/08 @21:28 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No samples reported apply to this initial verification calibration.

- For explosives continuing calibration performed on 04/07/09 @20:31 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Sample 39DW15 (G9D010148-001) applies to this continuing calibration.

- For explosives continuing calibration performed on 04/08/09 @00:44 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. Samples 39DW16 (G9D010148-002) and 39DW17 (G9D010148-003) apply to this continuing calibration.

- For explosives continuing calibration performed on 04/08/09 @04:06 on instrument LC10.i, all criteria were met for target compounds. No qualifiers were applied. No samples reported apply to this continuing calibration.

- All explosives were non-detect; therefore, no confirmations were required on instrument LC9.i.

**V-System Monitoring Compound (Surrogates)**
Laboratory performance on individual samples is established by means of spiking activities. The percent recovery (%R) for all samples and blanks must be within the laboratory control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria: 3,4-dinitrotoluene (81-127%)

- All criteria were met. No qualifiers were applied.

**VI-Laboratory Control Sample**
Laboratory control samples (LCS) are used to monitor long-term accuracy of the analytical method. The analysis is performed at a frequency of 1 per analytical batch. The percent recoveries (%Rs) must be within the laboratory control limits. DoD QSM solid LCS recovery limits are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9D030000-288 was used as solid LCS for explosives analyzed on 04/07/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the laboratory control limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-13 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 39DW15 (G9D010148-001) was used as the solid MS/MSD for the explosive analysis on 04/08/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this MS/MSD.

**VIII-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**IX-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The calculation was based calibration factors. The absolute percent difference (%D) between the calculated and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns.

- All values >MDL and <MRL or <3*MDL (whichever was greater) were qualified as estimated "J".

- All explosives were non-detect. No confirmations were required.

**Sample: 39DW15MS (G9D010148-001MS), 2,4,6-trinitrotoluene**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Vt = Volume of total extract (mL).
CF = Average relative calibration factor for compound being measured (from ICAL)
W(s) = Weight of sample in kilograms.
D = Percent dry weight (100 - % moisture in sample)/100 (Air dried =1.00)
DF = Dilution factor

Conc. µg/kg = (4634 * 80 * 1) / (89.04988 * 10.0 * 1.00) = 416.58 µg/kg = 0.416 mg/kg
Reported Value = 0.416 mg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW15**

**HPLC**

**Lot-Sample #...:** G9D010148-001 **Work Order #...:** K9EL31AC **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/03/09 **Analysis Date..:** 04/07/09
**Prep Batch #...:** 9093288
**Dilution Factor:** 0.99
**% Moisture.....:** 19 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.012 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| 2,4-Dinitrotoluene | ND | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | ND | 1.2 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| Nitrobenzene | ND | 0.25 | mg/kg | 0.017 |
| 1,3,5-Trinitrobenzene | ND | 0.25 | mg/kg | 0.0099 |
| 2,4,6-Trinitrotoluene | ND | 0.25 | mg/kg | 0.019 |
| HMX | ND | 0.25 | mg/kg | 0.012 |
| RDX | ND | 0.25 | mg/kg | 0.012 |
| Tetryl | ND | 0.25 | mg/kg | 0.0099 |
| 3-Nitrotoluene | ND | 0.25 | mg/kg | 0.015 |
| 4-Amino-2,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.0099 |
| PETN | ND | 0.50 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 91 | (81 - 127) |

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW16**

**HPLC**

**Lot-Sample #...:** G9D010148-002 **Work Order #...:** K9EL71AN **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/03/09 **Analysis Date..:** 04/08/09
**Prep Batch #...:** 9093288
**Dilution Factor:** 1
**% Moisture.....:** 19 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.012 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| 2,4-Dinitrotoluene | ND | 0.25 | mg/kg | 0.0053 |
| 2,6-Dinitrotoluene | ND | 1.2 | mg/kg | 0.0073 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| Nitrobenzene | ND | 0.25 | mg/kg | 0.018 |
| 1,3,5-Trinitrobenzene | ND | 0.25 | mg/kg | 0.010 |
| 2,4,6-Trinitrotoluene | ND | 0.25 | mg/kg | 0.019 |
| HMX | ND | 0.25 | mg/kg | 0.012 |
| RDX | ND | 0.25 | mg/kg | 0.012 |
| Tetryl | ND | 0.25 | mg/kg | 0.010 |
| 3-Nitrotoluene | ND | 0.25 | mg/kg | 0.016 |
| 4-Amino-2,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.010 |
| PETN | ND | 0.50 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 90 | (81 - 127) |

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW17**

**HPLC**

**Lot-Sample #...:** G9D010148-003 **Work Order #...:** K9EL81AN **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/03/09 **Analysis Date..:** 04/08/09
**Prep Batch #...:** 9093288
**Dilution Factor:** 0.99
**% Moisture.....:** 19 **Method.....:** SW846 8330B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.012 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| 2,4-Dinitrotoluene | ND | 0.25 | mg/kg | 0.0052 |
| 2,6-Dinitrotoluene | ND | 1.2 | mg/kg | 0.0072 |
| Nitroglycerin | ND | 0.50 | mg/kg | 0.015 |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| Nitrobenzene | ND | 0.25 | mg/kg | 0.017 |
| 1,3,5-Trinitrobenzene | ND | 0.25 | mg/kg | 0.0099 |
| 2,4,6-Trinitrotoluene | ND | 0.25 | mg/kg | 0.019 |
| HMX | ND | 0.25 | mg/kg | 0.012 |
| RDX | ND | 0.25 | mg/kg | 0.012 |
| Tetryl | ND | 0.25 | mg/kg | 0.0099 |
| 3-Nitrotoluene | ND | 0.25 | mg/kg | 0.015 |
| 4-Amino-2,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.0099 |
| PETN | ND | 0.50 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 90 | (81 - 127) |

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – TAL Metals
Test America Laboratories, Inc., SDG G9D010148

**DATE:** June 16, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU39 Removal Action on March 31, 2009. Solid samples were analyzed for target analyte list (TAL) metals using USEPA SW-846 3050B/6010B for ICP metals and SW-846 7471A for mercury. A total of three solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 39DW15 | G9D010148-001 | 39DW17 | G9D010148-003 |
| 39DW16 | G9D010148-002 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Blank Analysis |
| | X | ICP Interference Check Sample (ICS) |
| | X | Laboratory Control Sample (LCS) |
| | X | Laboratory Sample Duplicate |
| X | | Matrix Spike and Spike Duplicate |
| | X | ICP Serial Dilution |
| | X | Field Sample Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

6/16/09
Date

**RFAAP VALIDATION REPORT**
**METALS REVIEW**
**SDG G9D010148**

## I-Holding Times and Preservation

The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: For solid matrices, the samples are shipped cool @4°C±2°C with a maximum holding time is 180 days for ICP metals and 28 days for mercury.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/31/09, the coolers were received by the primary laboratory (Test America) on 04/01/09 at 5.0°C, 5.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 03/31/09 for metals analysis. For solid samples, the soil samples were digested on 04/03/09 and analyzed on 04/07/09 and 04/09/09 (manganese) for ICP metals. Mercury was digested on 04/02/09 and analyzed on 04/02/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Initial and Continuing Calibration

Requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

| | | | |
|---|---|---|---|
| ICP: | 1- blank (DoD QSM <½ MRL)<br>3 – standards (r≥0.995)<br>ICV/CCV (90-110%) (DoD QSM 90-110%)<br>MRL (70-130%) (DoD QSM 80-120%)<br>High Std. (95-105%) | Hg: | 1 – blank (DoD QSM <½ MRL)<br>5 – standards (r≥0.995)<br>ICV/CCV (80-120%)(DoD QSM ICV 90-110% & CCV 80-120%)<br>MRL (80-120%) (DoD QSM 80-120%)<br>High Std. (95-105%) |

- The solid samples were analyzed for ICP metals on 04/07/09 and 04/09/09 (manganese). Mercury was analyzed for the solid samples on 04/02/09 with a correlation coefficient of 0.9999. All ICV/CCV/High Standard/MRL criteria were met for all metals and runs. No qualifiers were applied.

## III-Blanks

Blanks (preparation and calibration blanks) are assessed to determine the existence and magnitude of contamination problems. No contaminants should be detected (i.e. <MDL) in any of the associated blanks. DoD QSM limits are <½MRL for the method blank and <2*MDL for the calibration blanks. Samples are qualified "B" when they are less than 5x the absolute value of the maximum blank concentration. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10 for ICP and Hg = 12) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | Analysis | QC Blank ID | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 04/07/09 | ICP Metals | ICB/CCBs | <2*MDL | NA | None |
| 04/02/09 | Mercury | ICB/CCBs | <2*MDL | NA | None |
| 04/07/09 | ICP Metals | G9D030000-306 | <1/2*MRL | NA | None |
| 04/02/09 | Mercury | G9D020000-524 | <1/2*MRL | NA | None |

NA = Not Applicable
MDL = Method Detection Limit.
MRL = Method Reporting Limit.

**IV-ICP Interference Check Sample (ICS)**
The ICP interference check sample (ICS) verifies interelement and background correction factors. ICP Interference Check is performed at the beginning and end of each sample analysis run. Control limits are 80-120% (DoD QSM limits 80-120%).

- All criteria were met. No qualifiers were applied.

**V-Laboratory Control Samples (LCS)**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All aqueous LCS results must fall within the control limits. The DoD QSM solid LCS recovery limits are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9D030000-306 was used as solid LCS for ICP metals analysis on 04/07/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this LCS.

- Sample G9D020000-524 was used as solid LCS for mercury analysis on 04/02/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this LCS.

**VI-Laboratory Duplicate Sample Analysis**
Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits. DoD QSM limits for metals are 20% RPD for ICP metals and mercury.

- No laboratory duplicate was analyzed. Laboratory precision was evaluated using the Matrix Spike and Matrix Spike Duplicate (Section VII).

**VII-Matrix Spike/Spike Duplicate**
MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Specific criteria include the analyses of matrix spike and matrix spike duplicate samples at a frequency of one MS and MSD per 20 samples of similar matrix. MS and MSD recoveries and relative percent differences between MS and MSD recoveries should be within the specified limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used. Post digestion spikes limits are 75-125% for ICP metals and mercury.

- Sample 39DW15 (G9D010148-001) was used as solid laboratory MS/MSD for ICP metals analysis on 04/07/09. Aluminum (1930%, 1840%), antimony (35%, 36%), arsenic (79%, 78%), beryllium (79%), iron (365%, 499%), manganese (123%, 161%), and selenium (78%, 76%) were outside criteria. All other recoveries and RPD values were within criteria. The associated LCS (Section V) was within criteria. The sample concentration was >4 times the spike added for aluminum, iron, and manganese; therefore, no qualifiers were applied based upon these outliers. Antimony, arsenic, beryllium, and selenium were qualified bias low "L" for detects and "UL" for non-detects based upon the low recoveries. All other metals were within criteria. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this MS/MSD.

- Sample G9D010274-012 was used as solid MS/MSD for mercury analysis on 04/02/09. The spiked sample was not a site sample; therefore, it was not evaluated. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this MS/MSD.

**VIII-ICP Serial Dilution**

An ICP serial dilution is performed to determine whether significant physical or chemical interferences exist due to sample matrix at high concentrations. An analysis of a 5-fold dilution should agree within 10% difference of the original result when the concentration in sample is a factor of 50 above MDL.

- The serial dilution for ICP metals was analyzed on 04/07/09 using solid sample 39DW15 (G9D010148-001). Arsenic (123%), thallium (155%), cadmium (11.3%), and sodium (52.9%) were outside of criteria limits. Sample concentrations were <50 times MDL for arsenic, thallium, cadmium, and sodium; therefore, no qualifiers were applied based upon these outliers. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this serial dilution.

- The serial dilution for mercury was analyzed on 04/02/09 using solid sample G9D010274-012). The serial dilution sample was not a site sample; therefore, it was not evaluated. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this serial dilution.

**IX-Field Duplicate Sample Analysis**

Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 35% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**X-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification.

**Sample: 39DW15 (G9D010148-001), Barium**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(1261.3 µg/L)*(0.100 L)*(1)} / {(1.05 g)*(0.8140)} = 148 µg/g = 148 mg/kg

Reported concentration = 148 mg/kg
%D = 0.0%
Values were within 10% difference.

**Sample: 39DW15 (G9D010148-001), Mercury**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(0.287 µg/L)*(0.050 L)*(1)} / {(0.59 g)*(0.8140)} = 0.030 µg/g = 0.030 mg/kg

Reported concentration = 0.030 mg/kg
%D = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW15**

**TOTAL Metals**

**Lot-Sample #...:** G9D010148-001 **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**% Moisture.....:** 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9092524 | | | | | | |
| **Mercury** | **0.030 B J** | **0.049** | **mg/kg** | **SW846 7471A** | **04/02/09** | **K9EL31A4** |
| | | Dilution Factor: 1 | | MDL.....: 0.011 | | |
| **Prep Batch #...:** 9093306 | | | | | | |
| Silver | ND | 0.61 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL31AD |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Aluminum** | **12600** | **25.8** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AE** |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| **Arsenic** | **3.0 L** | **2.6** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AF** |
| | | Dilution Factor: 1 | | MDL.....: 0.86 | | |
| **Barium** | **148** | **2.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AG** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Beryllium** | **0.92 L** | **0.37** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AH** |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Calcium** | **1220** | **123** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AJ** |
| | | Dilution Factor: 1 | | MDL.....: 30.7 | | |
| Cadmium | ND | 0.37 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL31AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Cobalt** | **10.2** | **0.74** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AL** |
| | | Dilution Factor: 1 | | MDL.....: 0.25 | | |
| **Chromium** | **23.0** | **1.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AM** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Copper** | **11.4** | **3.1** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AN** |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| **Iron** | **17300** | **12.3** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AP** |
| | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| **Potassium** | **992** | **123** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AQ** |
| | | Dilution Factor: 1 | | MDL.....: 30.7 | | |

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**Shaw E & I Inc**

**Client Sample ID: 39DW15**

**TOTAL Metals**

**Lot-Sample #...:** G9D010148-001 **Matrix.....:** SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Magnesium** | **2160** | **61.4** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AR** |
| | | Dilution Factor: 1 | | MDL.....: 9.2 | | |
| **Manganese** | **767** | **1.5** | **mg/kg** | **SW846 6010B** | **04/03-04/09/09** | **K9EL31AT** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Sodium** | **35.5 B** J | **614** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AU** |
| | | Dilution Factor: 1 | | MDL.....: 30.7 | | |
| **Nickel** | **10.4** | **1.2** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AV** |
| | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| **Lead** | **15.9** | **2.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31AW** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL31AX |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND VL | 2.5 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL31A0 |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Thallium | ND | 2.5 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL31A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| **Vanadium** | **33.8** | **1.2** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31A2** |
| | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| **Zinc** | **50.5** | **3.7** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL31A3** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

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**Shaw E & I Inc**

**Client Sample ID: 39DW16**

**TOTAL Metals**

**Lot-Sample #...:** G9D010148-002 **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**% Moisture.....:** 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9092524 | | | | | | |
| **Mercury** | **0.032 B J** | **0.049** | **mg/kg** | **SW846 7471A** | **04/02/09** | **K9EL71AF** |
| | | Dilution Factor: 1 | | MDL.....: 0.011 | | |
| **Prep Batch #...:** 9093306 | | | | | | |
| Silver | ND | 0.61 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL71AP |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Aluminum** | **14300** | **25.8** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71AQ** |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| **Arsenic** | **3.5 L** | **2.6** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71AR** |
| | | Dilution Factor: 1 | | MDL.....: 0.86 | | |
| **Barium** | **139** | **2.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71AT** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Beryllium** | **0.93 L** | **0.37** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71AU** |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Calcium** | **1350** | **123** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71AV** |
| | | Dilution Factor: 1 | | MDL.....: 30.7 | | |
| Cadmium | ND | 0.37 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL71AW |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Cobalt** | **11.5** | **0.74** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71AX** |
| | | Dilution Factor: 1 | | MDL.....: 0.25 | | |
| **Chromium** | **24.1** | **1.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71A0** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Copper** | **13.4** | **3.1** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71A1** |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| **Iron** | **20200** | **12.3** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71A2** |
| | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| **Potassium** | **1390** | **123** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71A3** |
| | | Dilution Factor: 1 | | MDL.....: 30.7 | | |

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**Shaw E & I Inc**

**Client Sample ID: 39DW16**

**TOTAL Metals**

**Lot-Sample #...:** G9D010148-002 **Matrix.....:** SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Magnesium** | **2560** | **61.4** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71A4** |
| | | Dilution Factor: 1 | | MDL.....: 9.2 | | |
| **Manganese** | **856** | **1.5** | **mg/kg** | **SW846 6010B** | **04/03-04/09/09** | **K9EL71A5** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Sodium** | **36.8 B J** | **614** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71A6** |
| | | Dilution Factor: 1 | | MDL.....: 30.7 | | |
| **Nickel** | **12.1** | **1.2** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71A7** |
| | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| **Lead** | **19.5** | **2.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71A8** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL71A9 |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND VL | 2.5 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL71AA |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| **Thallium** | **0.67 B J** | **2.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71AC** |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| **Vanadium** | **36.3** | **1.2** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71AD** |
| | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| **Zinc** | **57.1** | **3.7** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL71AE** |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

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**Shaw E & I Inc**

**Client Sample ID: 39DW17**

**TOTAL Metals**

**Lot-Sample #...:** G9D010148-003 **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**% Moisture.....:** 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9092524 | | | | | | |
| **Mercury** | **0.032 B J** | **0.049** | **mg/kg** | **SW846 7471A** | **04/02/09** | **K9EL81AF** |
| | | Dilution Factor: 1 | | MDL.....: 0.011 | | |
| **Prep Batch #...:** 9093306 | | | | | | |
| Silver | ND | 0.62 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL81AP |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Aluminum** | **14200** | **25.9** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81AQ** |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| **Arsenic** | **3.9 L** | **2.6** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81AR** |
| | | Dilution Factor: 1 | | MDL.....: 0.86 | | |
| **Barium** | **130** | **2.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81AT** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Beryllium** | **0.89 L** | **0.37** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81AU** |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Calcium** | **11200** | **123** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81AV** |
| | | Dilution Factor: 1 | | MDL.....: 30.8 | | |
| Cadmium | ND | 0.37 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL81AW |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Cobalt** | **10.7** | **0.74** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81AX** |
| | | Dilution Factor: 1 | | MDL.....: 0.25 | | |
| **Chromium** | **27.0** | **1.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81A0** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Copper** | **14.1** | **3.1** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81A1** |
| | | Dilution Factor: 1 | | MDL.....: 0.62 | | |
| **Iron** | **21500** | **12.3** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81A2** |
| | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| **Potassium** | **1390** | **123** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81A3** |
| | | Dilution Factor: 1 | | MDL.....: 30.8 | | |

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**Shaw E & I Inc**

**Client Sample ID: 39DW17**

**TOTAL Metals**

**Lot-Sample #...:** G9D010148-003 **Matrix.....:** SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| **Magnesium** | **8480** | | **61.6** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81A4** |
| | | | Dilution Factor: 1 | | MDL.....: 9.2 | | |
| **Manganese** | **769** | | **1.5** | **mg/kg** | **SW846 6010B** | **04/03-04/09/09** | **K9EL81A5** |
| | | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Sodium** | **45.7 B** | J | **616** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81A6** |
| | | | Dilution Factor: 1 | | MDL.....: 30.8 | | |
| **Nickel** | **11.4** | | **1.2** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81A7** |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| **Lead** | **21.5** | | **2.5** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81A8** |
| | | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Antimony | ND | VL | 1.8 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL81A9 |
| | | | Dilution Factor: 1 | | MDL.....: 0.62 | | |
| Selenium | ND | VL | 2.5 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL81AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Thallium | ND | | 2.5 | mg/kg | SW846 6010B | 04/03-04/07/09 | K9EL81AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.62 | | |
| **Vanadium** | **36.4** | | **1.2** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81AD** |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| **Zinc** | **54.1** | | **3.7** | **mg/kg** | **SW846 6010B** | **04/03-04/07/09** | **K9EL81AE** |
| | | | Dilution Factor: 1 | | MDL.....: 0.74 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Pesticides and PCBs
Test America Laboratories, Inc., SDG G9D010148

**DATE:** June 17, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU39 Removal Action on March 31, 2009. Solid samples were analyzed for pesticides and PCBs using USEPA Method 3550B/8081A and 3550B/3665A/8082, respectively. A total of three solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 39DW15 | G9D010148-001 | 39DW17 | G9D010148-003 |
| 39DW16 | G9D010148-002 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| X | | Continuing Calibration |
| | X | Blank Analysis |
| | X | System Monitoring Compounds |
| | X | Laboratory Control Samples |
| | X | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| | X | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

6/17/09

Date

**RFAAP VALIDATION REPORT**
**PESTICIDE/PCB REVIEW**
**SDG G9D010148**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, pesticide and PCB compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/31/09, the coolers were received by the primary laboratory (Test America) on 04/01/09 at 5.0°C, 5.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 03/31/09. The pesticides were extracted on 04/03/09 and analyzed on 04/07/09. The PCBs were extracted on 04/03/09 and analyzed on 04/07/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Instrument Performance Check (Degradation Standard)**
Performance checks on the gas chromatograph with electron capture detector (GC/ECD) system are performed to ensure adequate resolution and instrument sensitivity. The performance evaluation mixture (PEM) must be analyzed at the beginning of the analytical sequence. The breakdown of Endrin and 4,4'-DDT must be ≤15% on both signals.

- For analysis performed on 02/03/09 @10:29, endrin and 4,4'-DDT percent breakdowns were 4.5% and 0.9% on signal #1 and 4.6% and 0.6% on signal #2, respectively. All criteria were met. No qualifiers were applied.

- For analysis performed on 02/03/09 @23:08, endrin and 4,4'-DDT percent breakdowns were 5.0% and 1.0% on signal #1 and 5.4% and 0.7% on signal #2, respectively. All criteria were met. No qualifiers were applied.

- For analysis performed on 04/03/09 @07:34, endrin and 4,4'-DDT percent breakdowns were 4.0% and 4.7% on signal #1 and 3.7% and 0.3% on signal #2, respectively. All criteria were met. No qualifiers were applied.

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5 point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. Calibration factors are generated for each compound. The DoD QSM specifies that the percent relative standard deviation (%RSD) for all single peak target analytes, and aroclors 1016, 1242, 1254, and 1260 must be <20% or the mean %RSD for all analytes in the standard must be ≤20%. If linear regression is used, the correlation coefficient must be ≥0.995. All detects are qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits.

- For the pesticide initial calibration performed on 02/03-04/09 on instrument GC67AB.i, all criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) were analyzed using this initial calibration.

- For the PCB initial calibration performed on 04/01-02/09 on instrument GC66A.i, all criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) were analyzed using this initial calibration.

**IV-Continuing Calibration**

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for pesticide/PCB target compounds. Continuing calibration standards containing both target compounds and surrogates are analyzed at the beginning of each 12-hour analytical shift and after every 20 samples. The DoD QSM specifies that the percent difference (%D) or the average %Ds for all analytes in the standard from the initial calibration should be no greater than ±20%.

- For pesticide initial calibration verification performed on 02/03/09 @17:09 on instrument GC67AB.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For toxaphene pesticide initial calibration verification performed on 02/04/09 @04:28 on instrument GC67AB.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For pesticide continuing calibration performed on 04/07/09 @08:13 on instrument GC67AB.i, all criteria were met for signal #1 and for the signal #2. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) were analyzed using this continuing calibration.

- For toxaphene pesticide continuing calibration performed on 04/07/09 @08:53 on instrument GC67AB.i, all criteria were met for signal #1 and for the signal #2. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) were analyzed using this continuing calibration.

- For pesticide continuing calibration performed on 04/07/09 @17:33 on instrument GC67AB.i, 4,4'-DDD (37%), 4,4'-DDT (-36%), endrin aldehyde (33%), and methoxychlor (-26%) were outside criteria for signal all criteria were met for signal #1 and 4,4'-DDD (33%), 4,4'-DDT (-32%), and methoxychlor (-27%) for the signal #2. All samples were non-detect for 4,4'-DDD, 4,4'-DDT, endrin aldehyde, and methoxychlor and were qualified estimated "UJ" based upon these outliers. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) were analyzed using this continuing calibration.

- For toxaphene pesticide continuing calibration performed on 04/07/09 @18:13 on instrument GC67AB.i, toxaphene (-25%) was outside criteria for signal all criteria were met for signal #1 and within criteria for the signal #2. All samples were non-detect for toxaphene and were qualified estimated "UJ" based upon this outlier. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) were analyzed using this continuing calibration.

- For PCB 1016/1260 initial calibration verification performed on 04/02/09 @02:28 on instrument GC66A.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For PCB 1016/1260 continuing calibration performed on 04/06/09 @17:34 on instrument GC66A.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For PCB 1016/1260 continuing calibration performed on 04/06/09 @21:44 on instrument GC66A.i, all criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) were analyzed using this continuing calibration.

- For PCB 1016/1260 continuing calibration performed on 04/07/09 @02:40 on instrument GC66A.i, all criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) were analyzed using this continuing calibration.

**V-Blank Analysis**

The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5X) the maximum amount for pesticide and PCB target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 33) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Parameter | Analysis Date | QC Blank ID | Compound | Max Conc. µg/kg | Action Level µg/kg | B qualified samples |
|---|---|---|---|---|---|---|
| Pesticides | 04/07/09 | G9D030000-314 | All target <½MRL | NA | NA | None |
| PCBs | 04/06/09 | G9D030000-321 | All target <½MRL | NA | NA | None |

NA = Not Applicable
MRL = Method Reporting Limit

**VI-System Monitoring Compound (Surrogates)**

Laboratory performance on individual samples is evaluated through the review of surrogate spike samples. Surrogate spikes are added to all samples and blanks to measure their recovery in sample and blank matrices. The percent recoveries (%Rs) must be within the specified control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

| | | |
|---|---|---|
| Solid Criteria: | Tetrachloro-m-xylene: | Pesticides: 70-125% (DoD QSM 70-125%) |
| | Decachlorobiphenyl: | Pesticides: 55-130% (DoD QSM 55-130%) |
| Solid Criteria: | Decachlorobiphenyl: | PCBs: 60-125% (DoD QSM 60-125%) |

- All criteria were met. No qualifiers were applied.

**VII-Laboratory Control Samples**

Laboratory control samples (LCS) are used to monitor laboratory accuracy by calculating the percent recoveries of the spiked compounds. All LCS percent recoveries must be within the specified control limits. DoD QSM solid LCS recovery limits are specified in Table D-15 and Table D-17 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9D030000-314 was used as the solid LCS for the pesticide analysis on 04/07/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this LCS.

- Sample G9D030000-321 was used as the solid LCS for the PCB analysis on 04/06-07/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this LCS.

**VIII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. DoD solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-15 and Table D-17 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 39DW16 (G9D010148-002) was used as the MS/MSD for the toxaphene analysis and sample 39DW15 (G9D010148-001) was used as the MS/MSD for the remaining pesticides on 04/07/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this MS/MSD.

- Sample 39DW17 (G9D010148-003) was used as the MS/MSD for the PCB analysis on 04/07/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this MS/MSD.

**IX-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**X-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The difference between the calculated value and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J."

- All chlorinated pesticides and PCBs were non-detect. No confirmations were required.

**Sample: 39DW15MS (G9D010148-001MS), alpha-chlordane**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area/response for compound being measured.
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10000 µL.
CF = Ave calibration response factor for compound being measured from ICAL (Area/pg)
Vi = Volume of extract injected (mL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100 = 1.0 for Wet Weight
DF = Dilution factor

Conc. µg/kg = (68113354Area*10000µL*1) / (3076016Area/pg*(1000pg/ng)*1µL*29.55*0.814)
= 9.38 µg/kg (Signal #1)

Conc. µg/kg = (47505964Area*10000µL*1) / (2277026Area/pg*(1000pg/ng)*1µL*29.55g*0.814)
= 8.84 µg/kg (Signal #2)

Reported Value = 8.84 µg/kg (Signal #2)
% Difference = 0.0%
Values were within 10% difference

**Sample: 39DW17MS (G9D010148-003MS), Aroclor 1260**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area/response for compound being measured.
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10000 µL.
CF = Ave calibration response factor for compound being measured from ICAL (Area/pg)
Vi = Volume of extract injected (µL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100 = 1.0 for Wet Weight
DF = Dilution factor

Conc (Totals) µg/kg = (2985806704Area*10000µL*1) / (15765634Area/pg*(1000)*1µL*30.13g*0.812)
= 77.4 µg/kg (Signal #1)

Reported Value = 77.4 µg/kg (signal #1)
% Difference = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW15**

**GC Semivolatiles**

**Lot-Sample #...:** G9D010148-001 **Work Order #...:** K9EL31A6 **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/03/09 **Analysis Date..:** 04/07/09
**Prep Batch #...:** 9093314
**Dilution Factor:** 1.01
**% Moisture.....:** 19 **Method.....:** SW846 8081A

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | 2.1 | ug/kg | 0.27 |
| gamma-BHC (Lindane) | ND | 2.1 | ug/kg | 0.21 |
| Heptachlor | ND | 2.1 | ug/kg | 0.24 |
| Aldrin | ND | 2.1 | ug/kg | 0.26 |
| beta-BHC | ND | 2.1 | ug/kg | 0.41 |
| delta-BHC | ND | 2.1 | ug/kg | 0.20 |
| Heptachlor epoxide | ND | 2.1 | ug/kg | 0.15 |
| Endosulfan I | ND | 2.1 | ug/kg | 0.17 |
| gamma-Chlordane | ND | 2.1 | ug/kg | 0.41 |
| alpha-Chlordane | ND | 2.1 | ug/kg | 0.25 |
| 4,4'-DDE | ND | 4.2 | ug/kg | 0.27 |
| Dieldrin | ND | 4.2 | ug/kg | 0.40 |
| Endrin | ND | 4.2 | ug/kg | 0.30 |
| 4,4'-DDD | ND UJ | 4.2 | ug/kg | 0.32 |
| Endosulfan II | ND | 4.2 | ug/kg | 0.82 |
| 4,4'-DDT | ND UJ | 4.2 | ug/kg | 0.50 |
| Endrin aldehyde | ND UJ | 4.2 | ug/kg | 0.34 |
| Methoxychlor | ND UJ | 21 | ug/kg | 1.6 |
| Endosulfan sulfate | ND | 4.2 | ug/kg | 0.27 |
| Endrin ketone | ND | 4.2 | ug/kg | 0.42 |
| Toxaphene | ND UJ | 83 | ug/kg | 25 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 87 | (55 - 130) |
| Tetrachloro-m-xylene | 84 | (70 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW16**

**GC Semivolatiles**

**Lot-Sample #...:** G9D010148-002 **Work Order #...:** K9EL71AH **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/03/09 **Analysis Date..:** 04/07/09
**Prep Batch #...:** 9093314
**Dilution Factor:** 1.01
**% Moisture.....:** 19 **Method.....:** SW846 8081A

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | 2.1 | ug/kg | 0.27 |
| gamma-BHC (Lindane) | ND | 2.1 | ug/kg | 0.21 |
| Heptachlor | ND | 2.1 | ug/kg | 0.24 |
| Aldrin | ND | 2.1 | ug/kg | 0.26 |
| beta-BHC | ND | 2.1 | ug/kg | 0.41 |
| delta-BHC | ND | 2.1 | ug/kg | 0.20 |
| Heptachlor epoxide | ND | 2.1 | ug/kg | 0.15 |
| Endosulfan I | ND | 2.1 | ug/kg | 0.17 |
| gamma-Chlordane | ND | 2.1 | ug/kg | 0.41 |
| alpha-Chlordane | ND | 2.1 | ug/kg | 0.25 |
| 4,4'-DDE | ND | 4.2 | ug/kg | 0.27 |
| Dieldrin | ND | 4.2 | ug/kg | 0.40 |
| Endrin | ND | 4.2 | ug/kg | 0.30 |
| 4,4'-DDD | ND UJ | 4.2 | ug/kg | 0.32 |
| Endosulfan II | ND | 4.2 | ug/kg | 0.82 |
| 4,4'-DDT | ND UJ | 4.2 | ug/kg | 0.50 |
| Endrin aldehyde | ND UJ | 4.2 | ug/kg | 0.34 |
| Methoxychlor | ND UJ | 21 | ug/kg | 1.6 |
| Endosulfan sulfate | ND | 4.2 | ug/kg | 0.27 |
| Endrin ketone | ND | 4.2 | ug/kg | 0.42 |
| Toxaphene | ND UJ | 83 | ug/kg | 25 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 89 | (55 - 130) |
| Tetrachloro-m-xylene | 80 | (70 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW17**

**GC Semivolatiles**

**Lot-Sample #...:** G9D010148-003 **Work Order #...:** K9EL81AH **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/03/09 **Analysis Date..:** 04/07/09
**Prep Batch #...:** 9093314
**Dilution Factor:** 0.98
**% Moisture.....:** 19 **Method.....:** SW846 8081A

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | 2.1 | ug/kg | 0.27 |
| gamma-BHC (Lindane) | ND | 2.1 | ug/kg | 0.21 |
| Heptachlor | ND | 2.1 | ug/kg | 0.23 |
| Aldrin | ND | 2.1 | ug/kg | 0.25 |
| beta-BHC | ND | 2.1 | ug/kg | 0.40 |
| delta-BHC | ND | 2.1 | ug/kg | 0.19 |
| Heptachlor epoxide | ND | 2.1 | ug/kg | 0.14 |
| Endosulfan I | ND | 2.1 | ug/kg | 0.17 |
| gamma-Chlordane | ND | 2.1 | ug/kg | 0.40 |
| alpha-Chlordane | ND | 2.1 | ug/kg | 0.24 |
| 4,4'-DDE | ND | 4.1 | ug/kg | 0.27 |
| Dieldrin | ND | 4.1 | ug/kg | 0.39 |
| Endrin | ND | 4.1 | ug/kg | 0.29 |
| 4,4'-DDD | ND UJ | 4.1 | ug/kg | 0.31 |
| Endosulfan II | ND | 4.1 | ug/kg | 0.80 |
| 4,4'-DDT | ND UJ | 4.1 | ug/kg | 0.48 |
| Endrin aldehyde | ND UJ | 4.1 | ug/kg | 0.33 |
| Methoxychlor | ND UJ | 21 | ug/kg | 1.6 |
| Endosulfan sulfate | ND | 4.1 | ug/kg | 0.27 |
| Endrin ketone | ND | 4.1 | ug/kg | 0.41 |
| Toxaphene | ND UJ | 81 | ug/kg | 25 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 98 | (55 - 130) |
| Tetrachloro-m-xylene | 83 | (70 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW15**

**GC Semivolatiles**

**Lot-Sample #...:** G9D010148-001 **Work Order #...:** K9EL31A7 **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/03/09 **Analysis Date..:** 04/07/09
**Prep Batch #...:** 9093321
**Dilution Factor:** 1.01
**% Moisture.....:** 19 **Method.....:** SW846 8082

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 41 | ug/kg | 10 |
| Aroclor 1221 | ND | 41 | ug/kg | 13 |
| Aroclor 1232 | ND | 41 | ug/kg | 10 |
| Aroclor 1242 | ND | 41 | ug/kg | 10 |
| Aroclor 1248 | ND | 41 | ug/kg | 10 |
| Aroclor 1254 | ND | 41 | ug/kg | 10 |
| Aroclor 1260 | ND | 41 | ug/kg | 10 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 87 | (60 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW16**

**GC Semivolatiles**

**Lot-Sample #...:** G9D010148-002 **Work Order #...:** K9EL71AJ **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/03/09 **Analysis Date..:** 04/07/09
**Prep Batch #...:** 9093321
**Dilution Factor:** 1.01
**% Moisture.....:** 19 **Method.....:** SW846 8082

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 41 | ug/kg | 10 |
| Aroclor 1221 | ND | 41 | ug/kg | 13 |
| Aroclor 1232 | ND | 41 | ug/kg | 10 |
| Aroclor 1242 | ND | 41 | ug/kg | 10 |
| Aroclor 1248 | ND | 41 | ug/kg | 10 |
| Aroclor 1254 | ND | 41 | ug/kg | 10 |
| Aroclor 1260 | ND | 41 | ug/kg | 10 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 88 | (60 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW17**

**GC Semivolatiles**

**Lot-Sample #...:** G9D010148-003 **Work Order #...:** K9EL81AJ **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/03/09 **Analysis Date..:** 04/07/09
**Prep Batch #...:** 9093321
**Dilution Factor:** 0.98
**% Moisture.....:** 19 **Method.....:** SW846 8082

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 40 | ug/kg | 10 |
| Aroclor 1221 | ND | 40 | ug/kg | 13 |
| Aroclor 1232 | ND | 40 | ug/kg | 10 |
| Aroclor 1242 | ND | 40 | ug/kg | 10 |
| Aroclor 1248 | ND | 40 | ug/kg | 10 |
| Aroclor 1254 | ND | 40 | ug/kg | 10 |
| Aroclor 1260 | ND | 40 | ug/kg | 10 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 95 | (60 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – pH
Test America Laboratories, Inc., SDG G9D010148

**DATE:** June 17, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at the Radford Army Ammunition Plant for SWMU39 Removal Action on March 31, 2009. Samples were analyzed for pH using USEPA SW-846 9045C. A total of three soil samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 39DW15 | G9D010148-001 | 39DW17 | G9D010148-003 |
| 39DW16 | G9D010148-002 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Laboratory Control Samples |
| | X | Laboratory Sample Duplicate |
| | X | Calculation Verification |

The quality of data collected in support of this sampling activity is considered acceptable.

Eric Malarek, Chemist

6/17/09
Date

**RFAAP VALIDATION REPORT**
**pH REVIEW**
**SDG G9D010148**

**I-Holding Times and Preservation**
The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: Preserved, Cool 4°C±2°C, ASAP within 24 hours for pH. The dates and times were compared between the sample collection and laboratory analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/31/09, the coolers were received by the primary laboratory (Test America) on 04/01/09 at 5.0°C, 5.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 03/31/09 for metals analysis. For solid samples, the soil samples were analyzed on 04/07/09 for pH. Sample collection dates may be found on the attached form 1s. pH should be analyzed ASAP within 24 hours; however, no published holding times are available for pH in soil. No qualifiers were applied based on this outlier.

**II-Initial and Continuing Calibration**
Bench and run summary sheets were reviewed to determine whether calibration was performed at the beginning of sample analysis using the following criteria. Percent recoveries for initial and continuing calibration must be ±0.05 units for pH.

pH: 1 - blank
3 – buffer standards

- pH analysis was run on 04/07/09. All criteria were met. No qualifiers were applied.

**III-Laboratory Control Samples**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All LCS results must fall within the control limits (98-102%).

- Sample G9D070000-465 was used as solid LCS for pH analysis on 04/07/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this LCS.

**IV-Laboratory Duplicate Sample Analysis**
Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits (RPD≤20%).

- Sample 39DW16 (G9D010148-002) was used as solid laboratory duplicate for pH analysis on 04/07/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this laboratory duplicate.

**V-Calculation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. The following calculations were performed for verification:

**Sample: 39DW15 (G9D010148-001), pH**

pH (units) = Reading

pH (units) = 6.684 = 6.7

Reported Value = 6.7 units

% Difference = 0.0%

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.

[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW15**

**General Chemistry**

**Lot-Sample #...:** G9D010148-001 **Work Order #...:** K9EL3 **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**% Moisture.....:** 19

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| pH | 6.7 | 0.10 | -- | SW846 9045C | 04/07/09 | 9097465 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |
| Percent Moisture | 18.6 | 0.10 | % | ASTM D 2216-90 | 04/02-04/07/09 | 9092265 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |

# Form I

Shaw E & I Inc

Client Sample ID: 39DW16

General Chemistry

Lot-Sample #...: G9D010148-002 Work Order #...: K9EL7 Matrix.....: SO
Date Sampled...: 03/31/09 Date Received..: 04/01/09
% Moisture.....: 19

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| pH | 6.6 | 0.10 | -- | SW846 9045C | 04/07/09 | 9097465 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |
| Percent Moisture | 18.6 | 0.10 | % | ASTM D 2216-90 | 04/02-04/07/09 | 9092265 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW17**

**General Chemistry**

**Lot-Sample #...:** G9D010148-003 **Work Order #...:** K9EL8 **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**% Moisture.....:** 19

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| **pH** | **7.5** | **0.10** | -- | **SW846 9045C** | **04/07/09** | **9097465** |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |
| **Percent Moisture** | **18.8** | **0.10** | **%** | **ASTM D 2216-90** | **04/02-04/07/09** | **9092265** |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Semi-Volatiles Compounds
Test America Laboratories, Inc., SDG G9D010148

**DATE:** June 16, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU39 Removal Action on March 31, 2009. Samples were analyzed for semivolatile organic compounds (SVOCs) using USEPA SW846 Methods 3550B/8270C for solid matrices. A total of three solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 39DW15 | G9D010148-001 | 39DW17 | G9D010148-003 |
| 39DW16 | G9D010148-002 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Blank Analysis |
| | X | Surrogate Spikes |
| | X | Internal Standards |
| | X | Laboratory Control Sample |
| | X | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| | X | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable.

Eric Malarek, Chemist

6/16/09

Date

**RFAAP VALIDATION REPORT**
**SEMIVOLATILES REVIEW**
**SDG G9D010148**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For semivolatile (SVOC) compounds in solid matrices, the samples are cooled @4°C ± 2°C with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/31/09, the coolers were received by the primary laboratory (Test America) on 04/01/09 at 5.0°C, 5.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 03/31/09. The TCL SVOCs were extracted on 04/03/09 and analyzed on 04/07/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Instrument Performance Check**
GC/MS instrument performance checks are performed to ensure mass resolution, identification and, to some degree, sensitivity. The analysis of the instrument performance check solution must be performed at the beginning of each 12-hour period during which samples are analyzed.

- The instrument performance check, decafluorotriphenylphosphine (DFTPP), met the ion abundance criteria. No qualification was applied.

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used is capable of producing acceptable qualitative and quantitative data for compounds on the semivolatile target compound list (TCL). Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear calibration curve. For compounds analyzed using linear regression or second order, correlation coefficients must be >0.995 and coefficients of determination >0.99. The minimum relative response factor (RRF) criteria must be ≥0.05. The DoD QSM specifies that the initial calibration percent relative standard deviation (%RSD) must be ≤15% on the average for all compounds (<30% for CCCs). All detects are qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- Initial calibration for the SVOCs was performed on 04/03/09 on instrument sv5.i. All criteria were met (%RSD≤15% or ≤30%; RRF≥0.05) for all target compounds. No qualifiers were applied. Target compounds 2,4-dinitrophenol ($r^2$=0.9952; quadratic) and 4,6-dinitro-2-methylphenol ($r^2$=0.9992; quadratic) were quantified using second order regression with coefficients of determination >0.99. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) were analyzed using this initial calibration.

**IV-Continuing Calibration**

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used was capable of producing acceptable qualitative and quantitative data for semivolatile target compounds. Continuing calibration standards containing both target and surrogates compounds are analyzed at the beginning of each 12-hour analysis period following the analysis of the instrument performance check and prior to the analysis of blanks and samples. The minimum relative response factors (RRF) for semivolatile target compounds and surrogates must be ≥0.05. The DoD QSM specifies that the percent difference (%D) between the initial calibration RRF and the continuing calibration RRF must be within ±20% for all target compounds. Grossly exceeding is defined where %D>40%. All detects are qualified as estimated "J" for where there were exceeding %Ds, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- For SVOC initial calibration verification performed on 04/03/09 @16:52 on instrument sv5.i, all criteria were met for all target compounds. No qualifiers were applied. No samples reported apply to this initial calibration verification.

- For SVOC continuing calibration performed on 04/07/09 @13:47 on instrument sv5.i, all criteria were met for all target compounds. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this continuing calibration.

**V-Blank Analysis**

The purpose of blank analyses is to determine the presence and magnitude of contamination problems resulting from field and laboratory activities. A method blank analysis must be performed after the calibration standards and once every 12-hour time period beginning with the injection of DFTPP. No contaminants should be detected in any of the associated blanks > the MDL. DoD QSM criteria specifies all concentrations should be less than one-half MRL (<MRL for common laboratory contaminants phthalate esters). Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants phthalate esters, or 5 times (5X) the maximum amount for other semivolatile target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 33) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. µg/kg | Action Level µg/kg | B qualified samples |
|---|---|---|---|---|---|
| 04/07/09 | G9D030000-384 | All SVOC target <½MRL | NA | NA | None |

NA = Not applicable.
MRL = Method reporting limit.

**VI-Surrogate Spikes**
Laboratory performance on individual samples is evaluated through the review of surrogate spike samples. Surrogate spikes are added to all samples and blanks to measure their recovery in sample and blank matrices. The percent recoveries (%Rs) must be within the specified control limits. DoD surrogate recovery limits are specified in Table D-2 and Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria:
2-Chlorophenol-d4 (37-98%) – (DoD QSM = None Listed)
1,2-Dichlorobenzene-d4 (23-103%) – (DoD QSM = None Listed)
2-Fluorobiphenyl (45-105%) – (DoD QSM = 45-105%)
2-Fluorophenol (35-105%) – (DoD QSM = 35-105%)
Nitrobenzene-d5 (35-100%) – (DoD QSM = 35-100%)
Phenol – d5 (40-100%) – (DoD QSM = 40-100%)
p-Terphenyl – d14 (30-125%) – (DoD QSM = 30-125%)
2,4,6-Tribromophenol (35-125%) – (DoD QSM = 35-125%)

- All criteria were met. No qualifiers were applied.

**VII-Internal Standards**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Internal standard area counts for samples and blanks must not vary by more than a factor of two (-50% to +100%) from the associated calibration standard. The retention time of the internal standards in samples and blanks must not vary by more than ±30 seconds from the retention time of the associated calibration standard.

- All criteria were met. No qualifiers were applied.

**VIII-Laboratory Control Sample**
Laboratory control samples (LCS) are used to monitor laboratory accuracy by calculating the percent recoveries of the spiked compounds. All LCS percent recoveries must be within the specified control limits. DoD LCS solid recovery limits are specified in Table D-2 and Table D-7 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9D030000-384 was used as the solid LCS for the SVOC analysis on 04/07/09. All criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this LCS.

**IX-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. DoD solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-2 and Table D-7 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample 39DW17 (G9D010148-003) was used for the solid MS/MSD for SVOC analysis on 04/07/09. Benzo(a)anthracene (112%) was outside criteria. For all other target compounds, all criteria were met. The associated LCS was within criteria for benzo(a)anthracene (see Section VIII). The spiked sample was non-detect for benzo(a)anthracene; therefore, no qualifiers were applied based upon the high recovery. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this MS/MSD.

**X-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**XI-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. Percent difference (%D) between the calculated and reported values must be ≤10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J."

**Sample: G9D030000-384 LCS, 2,6-dinitrotoluene**

Conc. µg/kg = (Ax * Is * Vt * DF) / (Ais * RRF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area of characteristic ion for compound being measured.
Is = Amount of internal standard injected (ng).
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10,000 uL.
Ais = Area of characteristic ion for the internal standard.
RRF = Average relative response factor for compound being measured (from ICAL)
Vi = Volume of extract injected (uL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100
DF = Dilution factor

Conc. µg/kg = (251487 * 40 * 1000 * 1) / (416349 * 0.24510 * 1 * 30.00* 1.000) = 3290 µg/kg
Reported Value = 3290 µg/kg
% Difference = 0.0%
Values were within 10% difference

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW15

GC/MS Semivolatiles

Lot-Sample #...: G9D010148-001 Work Order #...: K9EL31A8 Matrix.....: SO
Date Sampled...: 03/31/09 Date Received..: 04/01/09
Prep Date.....: 04/03/09 Analysis Date..: 04/07/09
Prep Batch #...: 9093384
Dilution Factor: 1
% Moisture.....: 19 Method.....: SW846 8270C

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acenaphthene | ND | 410 | ug/kg | 100 |
| Acenaphthylene | ND | 410 | ug/kg | 100 |
| Anthracene | ND | 410 | ug/kg | 110 |
| Benz(a)anthracene | ND | 410 | ug/kg | 110 |
| Benzo(b)fluoranthene | ND | 410 | ug/kg | 120 |
| Benzo(k)fluoranthene | ND | 410 | ug/kg | 140 |
| Benzoic acid | ND | 2000 | ug/kg | 360 |
| Benzo(ghi)perylene | ND | 410 | ug/kg | 140 |
| Benzo(a)pyrene | ND | 410 | ug/kg | 120 |
| Benzyl alcohol | ND | 630 | ug/kg | 210 |
| bis(2-Chloroisopropyl) ether | ND | 410 | ug/kg | 97 |
| bis(2-Ethylhexyl) phthalate | ND | 410 | ug/kg | 120 |
| 4-Bromophenyl phenyl ether | ND | 410 | ug/kg | 100 |
| Butyl benzyl phthalate | ND | 410 | ug/kg | 120 |
| Carbazole | ND | 410 | ug/kg | 120 |
| 4-Chloroaniline | ND | 410 | ug/kg | 71 |
| 4-Chloro-3-methylphenol | ND | 410 | ug/kg | 110 |
| 2-Chloronaphthalene | ND | 410 | ug/kg | 100 |
| 2-Chlorophenol | ND | 410 | ug/kg | 110 |
| 4-Chlorophenyl phenyl ether | ND | 410 | ug/kg | 110 |
| Chrysene | ND | 410 | ug/kg | 100 |
| Dibenz(a,h)anthracene | ND | 410 | ug/kg | 130 |
| Dibenzofuran | ND | 410 | ug/kg | 110 |
| Di-n-butyl phthalate | ND | 410 | ug/kg | 120 |
| 1,2-Dichlorobenzene | ND | 410 | ug/kg | 92 |
| 1,3-Dichlorobenzene | ND | 410 | ug/kg | 96 |
| 1,4-Dichlorobenzene | ND | 410 | ug/kg | 95 |
| 3,3'-Dichlorobenzidine | ND | 2000 | ug/kg | 120 |
| 2,4-Dichlorophenol | ND | 410 | ug/kg | 110 |
| Diethyl phthalate | ND | 410 | ug/kg | 110 |
| 2,4-Dimethylphenol | ND | 610 | ug/kg | 210 |
| Dimethyl phthalate | ND | 410 | ug/kg | 110 |
| 4,6-Dinitro-2-methylphenol | ND | 2500 | ug/kg | 100 |

(Continued on next page)

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW15

GC/MS Semivolatiles

Lot-Sample #...: G9D010148-001 Work Order #...: K9EL31A8 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrophenol | ND | 2500 | ug/kg | 260 |
| 2,4-Dinitrotoluene | ND | 410 | ug/kg | 110 |
| 2,6-Dinitrotoluene | ND | 410 | ug/kg | 120 |
| Di-n-octyl phthalate | ND | 410 | ug/kg | 120 |
| Fluoranthene | ND | 410 | ug/kg | 120 |
| Fluorene | ND | 410 | ug/kg | 110 |
| Hexachlorobenzene | ND | 410 | ug/kg | 110 |
| Hexachlorobutadiene | ND | 410 | ug/kg | 100 |
| Hexachloroethane | ND | 410 | ug/kg | 100 |
| Indeno(1,2,3-cd)pyrene | ND | 410 | ug/kg | 120 |
| Isophorone | ND | 410 | ug/kg | 110 |
| 2-Methylnaphthalene | ND | 410 | ug/kg | 100 |
| 2-Methylphenol | ND | 410 | ug/kg | 71 |
| 3-Methylphenol & 4-Methylphenol | ND | 1200 | ug/kg | 410 |
| Naphthalene | ND | 410 | ug/kg | 100 |
| 2-Nitroaniline | ND | 2000 | ug/kg | 100 |
| 3-Nitroaniline | ND | 2000 | ug/kg | 210 |
| 4-Nitroaniline | ND | 2000 | ug/kg | 110 |
| Nitrobenzene | ND | 410 | ug/kg | 93 |
| 2-Nitrophenol | ND | 410 | ug/kg | 100 |
| 4-Nitrophenol | ND | 2500 | ug/kg | 340 |
| N-Nitrosodiphenylamine | ND | 410 | ug/kg | 110 |
| N-Nitrosodi-n-propyl-amine | ND | 410 | ug/kg | 100 |
| Pentachlorophenol | ND | 2500 | ug/kg | 63 |
| Phenanthrene | ND | 410 | ug/kg | 120 |
| Phenol | ND | 410 | ug/kg | 100 |
| Pyrene | ND | 410 | ug/kg | 120 |
| 1,2,4-Trichloro-benzene | ND | 410 | ug/kg | 100 |
| 2,4,5-Trichloro-phenol | ND | 410 | ug/kg | 100 |
| 2,4,6-Trichloro-phenol | ND | 410 | ug/kg | 100 |
| Hexachlorocyclopenta-diene | ND | 2000 | ug/kg | 76 |
| bis(2-Chloroethyl)-ether | ND | 410 | ug/kg | 100 |
| bis(2-Chloroethoxy) methane | ND | 410 | ug/kg | 110 |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW15

GC/MS Semivolatiles

Lot-Sample #...: G9D010148-001 Work Order #...: K9EL31A8 Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Chlorophenol-d4 | 49 | (37 - 98 ) |
| 1,2-Dichlorobenzene-d4 | 48 | (23 - 103) |
| 2-Fluorobiphenyl | 65 | (45 - 105) |
| 2-Fluorophenol | 49 | (35 - 105) |
| Nitrobenzene-d5 | 52 | (35 - 100) |
| Phenol-d5 | 56 | (40 - 100) |
| Terphenyl-d14 | 85 | (30 - 125) |
| 2,4,6-Tribromophenol | 95 | (35 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW16

GC/MS Semivolatiles

Lot-Sample #...: G9D010148-002 Work Order #...: K9EL71AK Matrix.....: SO
Date Sampled...: 03/31/09 Date Received..: 04/01/09
Prep Date.....: 04/03/09 Analysis Date..: 04/07/09
Prep Batch #...: 9093384
Dilution Factor: 1.02
% Moisture.....: 19 Method.....: SW846 8270C

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Butyl benzyl phthalate | ND | 410 | ug/kg | 120 |
| Carbazole | ND | 410 | ug/kg | 120 |
| 4-Chloroaniline | ND | 410 | ug/kg | 73 |
| 4-Chloro-3-methylphenol | ND | 410 | ug/kg | 120 |
| 2-Chloronaphthalene | ND | 410 | ug/kg | 100 |
| 2-Chlorophenol | ND | 410 | ug/kg | 110 |
| 4-Chlorophenyl phenyl ether | ND | 410 | ug/kg | 120 |
| Chrysene | ND | 410 | ug/kg | 110 |
| Dibenz(a,h)anthracene | ND | 410 | ug/kg | 130 |
| Dibenzofuran | ND | 410 | ug/kg | 110 |
| Di-n-butyl phthalate | ND | 410 | ug/kg | 120 |
| 1,2-Dichlorobenzene | ND | 410 | ug/kg | 94 |
| 1,3-Dichlorobenzene | ND | 410 | ug/kg | 98 |
| 1,4-Dichlorobenzene | ND | 410 | ug/kg | 96 |
| 3,3'-Dichlorobenzidine | ND | 2000 | ug/kg | 120 |
| 2,4-Dichlorophenol | ND | 410 | ug/kg | 110 |
| Diethyl phthalate | ND | 410 | ug/kg | 110 |
| 2,4-Dimethylphenol | ND | 630 | ug/kg | 210 |
| Dimethyl phthalate | ND | 410 | ug/kg | 110 |
| Acenaphthene | ND | 410 | ug/kg | 100 |
| Acenaphthylene | ND | 410 | ug/kg | 110 |
| Anthracene | ND | 410 | ug/kg | 110 |
| Benz(a)anthracene | ND | 410 | ug/kg | 120 |
| Benzo(b)fluoranthene | ND | 410 | ug/kg | 120 |
| Benzo(k)fluoranthene | ND | 410 | ug/kg | 140 |
| Benzoic acid | ND | 2000 | ug/kg | 360 |
| Benzo(ghi)perylene | ND | 410 | ug/kg | 140 |
| Benzo(a)pyrene | ND | 410 | ug/kg | 120 |
| Benzyl alcohol | ND | 640 | ug/kg | 210 |
| bis(2-Chloroisopropyl) ether | ND | 410 | ug/kg | 99 |
| bis(2-Ethylhexyl) phthalate | ND | 410 | ug/kg | 120 |
| 4-Bromophenyl phenyl ether | ND | 410 | ug/kg | 110 |
| 4,6-Dinitro-2-methylphenol | ND | 2500 | ug/kg | 100 |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW16

GC/MS Semivolatiles

Lot-Sample #...: G9D010148-002 Work Order #...: K9EL71AK Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Pentachlorophenol | ND | 2500 | ug/kg | 64 |
| 2,4-Dinitrophenol | ND | 2500 | ug/kg | 270 |
| 2,4-Dinitrotoluene | ND | 410 | ug/kg | 110 |
| 2,6-Dinitrotoluene | ND | 410 | ug/kg | 120 |
| Di-n-octyl phthalate | ND | 410 | ug/kg | 120 |
| Fluoranthene | ND | 410 | ug/kg | 120 |
| Fluorene | ND | 410 | ug/kg | 120 |
| Hexachlorobenzene | ND | 410 | ug/kg | 110 |
| Hexachlorobutadiene | ND | 410 | ug/kg | 100 |
| Hexachloroethane | ND | 410 | ug/kg | 100 |
| Indeno(1,2,3-cd)pyrene | ND | 410 | ug/kg | 120 |
| Isophorone | ND | 410 | ug/kg | 120 |
| 2-Methylnaphthalene | ND | 410 | ug/kg | 110 |
| 2-Methylphenol | ND | 410 | ug/kg | 73 |
| 3-Methylphenol & 4-Methylphenol | ND | 1300 | ug/kg | 410 |
| Naphthalene | ND | 410 | ug/kg | 100 |
| 2-Nitroaniline | ND | 2000 | ug/kg | 110 |
| 3-Nitroaniline | ND | 2000 | ug/kg | 210 |
| 4-Nitroaniline | ND | 2000 | ug/kg | 110 |
| Nitrobenzene | ND | 410 | ug/kg | 95 |
| 2-Nitrophenol | ND | 410 | ug/kg | 100 |
| 4-Nitrophenol | ND | 2500 | ug/kg | 350 |
| N-Nitrosodiphenylamine | ND | 410 | ug/kg | 110 |
| N-Nitrosodi-n-propyl-amine | ND | 410 | ug/kg | 110 |
| Phenanthrene | ND | 410 | ug/kg | 120 |
| Phenol | ND | 410 | ug/kg | 100 |
| Pyrene | ND | 410 | ug/kg | 120 |
| 1,2,4-Trichloro-benzene | ND | 410 | ug/kg | 100 |
| 2,4,5-Trichloro-phenol | ND | 410 | ug/kg | 100 |
| 2,4,6-Trichloro-phenol | ND | 410 | ug/kg | 110 |
| Hexachlorocyclopenta-diene | ND | 2000 | ug/kg | 78 |
| bis(2-Chloroethyl)-ether | ND | 410 | ug/kg | 100 |
| bis(2-Chloroethoxy) methane | ND | 410 | ug/kg | 110 |

(Continued on next page)

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW16

GC/MS Semivolatiles

Lot-Sample #...: G9D010148-002 Work Order #...: K9EL71AK Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Chlorophenol-d4 | 57 | (37 - 98 ) |
| 1,2-Dichlorobenzene-d4 | 54 | (23 - 103) |
| 2-Fluorobiphenyl | 61 | (45 - 105) |
| 2-Fluorophenol | 56 | (35 - 105) |
| Nitrobenzene-d5 | 55 | (35 - 100) |
| Phenol-d5 | 58 | (40 - 100) |
| Terphenyl-d14 | 92 | (30 - 125) |
| 2,4,6-Tribromophenol | 99 | (35 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW17

GC/MS Semivolatiles

| | | | |
|---|---|---|---|
| Lot-Sample #...: G9D010148-003 | Work Order #...: K9EL81AK | Matrix.....: SO | |
| Date Sampled...: 03/31/09 | Date Received..: 04/01/09 | | |
| Prep Date.....: 04/03/09 | Analysis Date..: 04/07/09 | | |
| Prep Batch #...: 9093384 | | | |
| Dilution Factor: 0.98 | | | |
| % Moisture.....: 19 | Method.....: SW846 8270C | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acenaphthene | ND | 400 | ug/kg | 100 |
| Acenaphthylene | ND | 400 | ug/kg | 100 |
| Anthracene | ND | 400 | ug/kg | 100 |
| Benz(a)anthracene | ND | 400 | ug/kg | 110 |
| Benzo(b)fluoranthene | ND | 400 | ug/kg | 110 |
| Benzo(k)fluoranthene | ND | 400 | ug/kg | 140 |
| Benzoic acid | ND | 1900 | ug/kg | 350 |
| Benzo(ghi)perylene | ND | 400 | ug/kg | 130 |
| Benzo(a)pyrene | ND | 400 | ug/kg | 110 |
| Benzyl alcohol | ND | 620 | ug/kg | 210 |
| bis(2-Chloroisopropyl) ether | ND | 400 | ug/kg | 95 |
| bis(2-Ethylhexyl) phthalate | ND | 400 | ug/kg | 120 |
| 4-Bromophenyl phenyl ether | ND | 400 | ug/kg | 100 |
| Butyl benzyl phthalate | ND | 400 | ug/kg | 110 |
| Carbazole | ND | 400 | ug/kg | 110 |
| 4-Chloroaniline | ND | 400 | ug/kg | 70 |
| 4-Chloro-3-methylphenol | ND | 400 | ug/kg | 110 |
| 2-Chloronaphthalene | ND | 400 | ug/kg | 98 |
| 2-Chlorophenol | ND | 400 | ug/kg | 110 |
| 4-Chlorophenyl phenyl ether | ND | 400 | ug/kg | 110 |
| Chrysene | ND | 400 | ug/kg | 100 |
| Dibenz(a,h)anthracene | ND | 400 | ug/kg | 120 |
| Dibenzofuran | ND | 400 | ug/kg | 100 |
| Di-n-butyl phthalate | ND | 400 | ug/kg | 120 |
| 1,2-Dichlorobenzene | ND | 400 | ug/kg | 91 |
| 1,3-Dichlorobenzene | ND | 400 | ug/kg | 94 |
| 1,4-Dichlorobenzene | ND | 400 | ug/kg | 93 |
| 3,3'-Dichlorobenzidine | ND | 1900 | ug/kg | 110 |
| 2,4-Dichlorophenol | ND | 400 | ug/kg | 110 |
| Diethyl phthalate | ND | 400 | ug/kg | 110 |
| 2,4-Dimethylphenol | ND | 600 | ug/kg | 200 |
| Dimethyl phthalate | ND | 400 | ug/kg | 110 |
| 4,6-Dinitro-2-methylphenol | ND | 2400 | ug/kg | 98 |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW17

GC/MS Semivolatiles

Lot-Sample #...: G9D010148-003 Work Order #...: K9EL81AK Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2,4-Dinitrophenol | ND | 2400 | ug/kg | 260 |
| 2,4-Dinitrotoluene | ND | 400 | ug/kg | 110 |
| 2,6-Dinitrotoluene | ND | 400 | ug/kg | 120 |
| Di-n-octyl phthalate | ND | 400 | ug/kg | 120 |
| Fluoranthene | ND | 400 | ug/kg | 110 |
| Fluorene | ND | 400 | ug/kg | 110 |
| Hexachlorobenzene | ND | 400 | ug/kg | 110 |
| Hexachlorobutadiene | ND | 400 | ug/kg | 99 |
| Hexachloroethane | ND | 400 | ug/kg | 98 |
| Indeno(1,2,3-cd)pyrene | ND | 400 | ug/kg | 120 |
| Isophorone | ND | 400 | ug/kg | 110 |
| 2-Methylnaphthalene | ND | 400 | ug/kg | 100 |
| 2-Methylphenol | ND | 400 | ug/kg | 70 |
| 3-Methylphenol & 4-Methylphenol | ND | 1200 | ug/kg | 400 |
| Naphthalene | ND | 400 | ug/kg | 99 |
| 2-Nitroaniline | ND | 1900 | ug/kg | 100 |
| 3-Nitroaniline | ND | 1900 | ug/kg | 200 |
| 4-Nitroaniline | ND | 1900 | ug/kg | 110 |
| Nitrobenzene | ND | 400 | ug/kg | 92 |
| 2-Nitrophenol | ND | 400 | ug/kg | 99 |
| 4-Nitrophenol | ND | 2400 | ug/kg | 340 |
| N-Nitrosodiphenylamine | ND | 400 | ug/kg | 100 |
| N-Nitrosodi-n-propyl-amine | ND | 400 | ug/kg | 100 |
| Pentachlorophenol | ND | 2400 | ug/kg | 62 |
| Phenanthrene | ND | 400 | ug/kg | 110 |
| Phenol | ND | 400 | ug/kg | 100 |
| Pyrene | ND | 400 | ug/kg | 110 |
| 1,2,4-Trichloro-benzene | ND | 400 | ug/kg | 100 |
| 2,4,5-Trichloro-phenol | ND | 400 | ug/kg | 100 |
| 2,4,6-Trichloro-phenol | ND | 400 | ug/kg | 100 |
| Hexachlorocyclopenta-diene | ND | 1900 | ug/kg | 75 |
| bis(2-Chloroethyl)-ether | ND | 400 | ug/kg | 98 |
| bis(2-Chloroethoxy) methane | ND | 400 | ug/kg | 110 |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW17

GC/MS Semivolatiles

Lot-Sample #...: G9D010148-003 Work Order #...: K9EL81AK Matrix.....: SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Chlorophenol-d4 | 46 | (37 - 98 ) |
| 1,2-Dichlorobenzene-d4 | 45 | (23 - 103) |
| 2-Fluorobiphenyl | 56 | (45 - 105) |
| 2-Fluorophenol | 47 | (35 - 105) |
| Nitrobenzene-d5 | 47 | (35 - 100) |
| Phenol-d5 | 50 | (40 - 100) |
| Terphenyl-d14 | 93 | (30 - 125) |
| 2,4,6-Tribromophenol | 91 | (35 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation - Volatiles
Test America Laboratories, Inc., SDG G9D010148

**DATE:** June 15, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU39 Removal Action on March 31, 2009. The samples were analyzed for target compound list (TCL) volatile organic compounds (VOCs) using USEPA SW846 Method 5035/8260B for solid matrices. A total of three samples were validated. The sample IDs are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 39DW15 | G9D010148-001 | 39DW17 | G9D010148-003 |
| 39DW16 | G9D010148-002 | | |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Instrument Performance Results |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Blank Analysis |
| | X | Laboratory Control Sample |
| | X | Matrix Spike / Spike Duplicate Sample |
| | X | System Monitoring Compounds |
| X | | Internal Standards |
| | X | Field Sample Duplicate |
| | X | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

6/15/09

Date

**RFAAP VALIDATION REPORT**
**VOLATILES REVIEW**
**SDG G9D010148**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of analysis. Holding time criteria: For soil samples cooled @ 4°C±2°C; the maximum holding time is 14 days from sample collection to analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 03/31/09, the coolers were received by the primary laboratory (Test America) on 04/01/09 at 5.0°C, 5.0°C, and 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: For the solid samples collected 03/31/09, the VOCs were prepped and analyzed on 04/04/09 and 04/05/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Instrument Performance Check**
The analysis of the instrument performance check solution must be performed at the beginning of each 12-hour period during which samples are analyzed.

- The instrument performance check, bromofluorobenzene (BFB), met the ion abundance criteria. No qualification was applied.

**III-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used is capable of producing acceptable qualitative and quantitative data for volatile target compounds. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear calibration curve. The RRF must be greater than 0.1 for chloromethane, 1,1-dichloroethane, and bromoform and greater than 0.3 for 1,1,2,2-tetrachloroethane and chlorobenzene. The minimum relative response factor (RRF) must be ≥0.05 for all other compounds. The DoD QSM specifies that the percent relative standard deviation (%RSD) must be ≤15% for each target compound and must be ≤30% for each calibration check compound. For compounds analyzed using linear regression or second order, correlation coefficients must be >0.995 and coefficients of determination >0.99. All detects are qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- For low level initial calibration performed on 04/02/09 on instrument HP11.i, all criteria were met for all target compounds (%RSD≤15% or ≤30%; RRF≥0.05). No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this initial calibration.

**IV-Continuing Calibration**

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument used is capable of producing acceptable qualitative and quantitative data for volatile target compounds. Continuing calibration establishes the 12-hour relative response factors on which the quantitations are based and checks satisfactory performance of the instrument on a day-to-day basis. The RRF must be greater than 0.1 for chloromethane, 1,1-dichloroethane, and bromoform and greater than 0.3 for 1,1,2,2-tetrachloroethane and chlorobenzene. The minimum relative response factor (RRF) must be ≥0.05 for all other compounds. The DoD QSM specifies that the percent difference (%D) between the initial calibration RRF and the continuing calibration RRF must be within 20% for all target compounds. All detects are qualified as estimated "J" for where there were exceeding %Ds, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits. For where there were low RRFs, all detects are qualified as estimated "J" and non-detects are rejected "R".

- For low level initial calibration verification performed on 04/03/09 @10:36 on instrument HP11i, all target compounds were within criteria (%D≤25%; %Drift≤25%; RRF≥0.05; ≤20% if used as continuing calibration). No reported samples apply to this initial calibration verification. No qualifiers were applied.

- For low level continuing calibration performed on 04/04/09 @17:07 on instrument HP11.i, chloromethane (24.8%), bromomethane (20.3%), acetone (20.8%), 1,2-dichloroethane (24.1%), bromodichloromethane (22.4%), 4-methyl-2-pentanone (23.9%), trans-1,3-dichloropropene (21.9%), and 2-hexanone (24.2%) were outside criteria (%D≤20%; %Drift≤20%; RRF≥0.05). All other target compounds were within criteria. For all associated samples, all noted target compounds were nondetect; therefore, no qualifiers were applied based upon these high %Ds. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this continuing calibration.

**V-Blank Analysis**

The purpose of blank analyses is to determine the presence and magnitude of contamination problems resulting from field and laboratory activities. A method blank analysis must be performed after the calibration standards and once every 12-hour time period beginning with the injection of BFB. No contaminants should be detected in any of the associated blanks > the MDL. The DoD QSM criteria specifies all concentrations should be less than one-half MRL (<MRL for common laboratory contaminants methylene chloride, acetone, and 2-butanone). Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants methylene chloride, acetone, and 2-butanone (MEK), or 5 times (5X) the maximum amount for other volatile target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 1) as needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | QC Blank ID | Compound | Max Conc. µg/kg | Action Level µg/kg | B qualified samples |
|---|---|---|---|---|---|
| 04/04/09 | G9D050000-012 | Chlorobenzene | 0.30J | 1.50 | None |

J = Estimated Value <MRL and >MDL.
MRL = Method Reporting Limit
MDL = Method Detection Limit

**VI-Laboratory Control Sample**
Data for laboratory control samples (LCS) are evaluated to determine long-term accuracy of the analytical method on various matrices. Percent recoveries (%Rs) should be within the specified control limits. DoD LCS soil recovery limits are specified in Table D-5 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9D050000-012 was used as the solid LCS for the low level VOC analysis on 04/04/09. Chloromethane (127%) was above DoD QSM criteria and within laboratory criteria. All associated samples were non-detect for chloromethane; therefore, no qualifiers were applied based upon the high recovery. For all other target compounds, all criteria were met. No qualifiers were applied. Samples 39DW15 (G9D010148-001), 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003) apply to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. The DoD MS/MSD solid recovery limits follow the LCS criteria and are specified in Table D-5 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- No project specific solid MS/MSD was analyzed with this SDG due to insufficient sample volumes; therefore, it was not evaluated.

**VIII-System Monitoring Compounds (Surrogates)**
Laboratory performance on individual samples is evaluated through the review of surrogate spike samples. Recoveries for system monitoring compounds in volatile samples and blanks must be within the specified control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria:
Dibromofluoromethane (84-124%) (DoD QSM = None Listed)
1,2-Dichloroethane-d4 (65-142%) (DoD QSM = None Listed)
Toluene-d8 (85-115%) (DoD QSM = 85-115%)
4-Bromofluorobenzene (85-120%) (DoD QSM = 85-120%)

- All criteria were met. No qualifiers were applied.

**IX-Internal Standards (IS)**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Specific criteria include: area counts (-50% to +100%) of the associated calibration standard, and retention time (± 30 seconds) from that of the associated calibration standard.

- Internal standard 1,4-dichlorobenzene-d4 was below criteria for samples 39DW16 (G9D010148-002), and 39DW17 (G9D010148-003). Compound 1,1,2,2-tetrachloroethane was qualified estimated "J" for detects and "UJ" for non-detects based upon these outliers for the associated samples. All other target compounds were quantified using other internal standards. For all other samples, all criteria were met.

**X-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No project specific solid field duplicate was analyzed with this SDG; therefore, it was not evaluated.

**XI-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J."

**Sample: G9D050000-012 LCS, chlorobenzene**

Conc. (µg/kg) = {(Ax)*(Is)*(DF)*(Vp)} / {(Ais)*(RRF)*(Ws)*Fs)}
where:
Ax is the compound area
Is is the corresponding internal standard concentration (ng/mL)
DF is the dilution factor
Vp is the volume purged (mL)
Ais is the corresponding internal standard area
RRF is the relative response factor
Ws is the weight of the sample (g)
Fs is the fraction solids for the sample

Conc. µg/kg = (834839 * 50 ng/mL * 1 * 5mL) / (405382 * 1.14307 * 5.00g * 1.000) =
= 90.1 µg/kg

Reported Conc. = 90.1 µg/kg
%D = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from Region III Modifications to the National Functional Guidelines for Organic Data Review (September 1994).

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW15**

**GC/MS Volatiles**

**Lot-Sample #...:** G9D010148-001 **Work Order #...:** K9EL31CA **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/04/09 **Analysis Date..:** 04/04/09
**Prep Batch #...:** 9095012
**Dilution Factor:** 0.9
**% Moisture.....:** 19 **Method.....:** SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 22 | ug/kg | 1.5 |
| Bromodichloromethane | ND | 5.5 | ug/kg | 0.59 |
| Bromoform | ND | 5.5 | ug/kg | 0.44 |
| Bromomethane | ND | 5.5 | ug/kg | 0.95 |
| 2-Butanone (MEK) | ND | 11 | ug/kg | 1.5 |
| Benzene | ND | 5.5 | ug/kg | 0.29 |
| Carbon disulfide | ND | 11 | ug/kg | 0.54 |
| Carbon tetrachloride | ND | 5.5 | ug/kg | 0.59 |
| Chlorobenzene | ND | 5.5 | ug/kg | 0.32 |
| Dibromochloromethane | ND | 5.5 | ug/kg | 0.23 |
| Chloroethane | ND | 5.5 | ug/kg | 0.50 |
| Chloroform | ND | 5.5 | ug/kg | 0.29 |
| Chloromethane | ND | 5.5 | ug/kg | 0.55 |
| 1,1-Dichloroethane | ND | 5.5 | ug/kg | 0.32 |
| 1,2-Dichloroethane | ND | 5.5 | ug/kg | 0.81 |
| cis-1,2-Dichloroethene | ND | 5.5 | ug/kg | 0.98 |
| trans-1,2-Dichloroethene | ND | 5.5 | ug/kg | 0.42 |
| 1,1-Dichloroethene | ND | 5.5 | ug/kg | 0.29 |
| 1,2-Dichloropropane | ND | 5.5 | ug/kg | 0.66 |
| cis-1,3-Dichloropropene | ND | 5.5 | ug/kg | 0.71 |
| trans-1,3-Dichloropropene | ND | 5.5 | ug/kg | 0.83 |
| Ethylbenzene | ND | 5.5 | ug/kg | 0.38 |
| 2-Hexanone | ND | 11 | ug/kg | 0.82 |
| Methylene chloride | ND | 5.5 | ug/kg | 0.93 |
| 4-Methyl-2-pentanone (MIBK) | ND | 11 | ug/kg | 1.0 |
| Styrene | ND | 5.5 | ug/kg | 0.34 |
| 1,1,2,2-Tetrachloroethane | ND UJ | 5.5 | ug/kg | 0.75 |
| Tetrachloroethene | ND | 5.5 | ug/kg | 0.67 |
| Toluene | ND | 5.5 | ug/kg | 0.67 |
| 1,1,1-Trichloroethane | ND | 5.5 | ug/kg | 0.40 |
| 1,1,2-Trichloroethane | ND | 5.5 | ug/kg | 0.49 |
| Trichloroethene | ND | 5.5 | ug/kg | 0.66 |
| Vinyl chloride | ND | 5.5 | ug/kg | 0.40 |
| m-Xylene & p-Xylene | ND | 5.5 | ug/kg | 0.90 |
| o-Xylene | ND | 5.5 | ug/kg | 0.36 |

(Continued on next page)

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW15

GC/MS Volatiles

**Lot-Sample #...:** G9D010148-001 **Work Order #...:** K9EL31CA **Matrix.....:** SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 100 | (84 - 124) |
| 1,2-Dichloroethane-d4 | 105 | (65 - 142) |
| Toluene-d8 | 101 | (85 - 115) |
| 4-Bromofluorobenzene | 97 | (85 - 120) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW16**

**GC/MS Volatiles**

**Lot-Sample #...:** G9D010148-002 **Work Order #...:** K9EL71CA **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/04/09 **Analysis Date..:** 04/05/09
**Prep Batch #...:** 9095012
**Dilution Factor:** 0.95
**% Moisture.....:** 19 **Method.....:** SW846 8260B

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|---|
| Acetone | ND | | 23 | ug/kg | 1.6 |
| Benzene | ND | | 5.8 | ug/kg | 0.30 |
| Bromodichloromethane | ND | | 5.8 | ug/kg | 0.62 |
| Bromoform | ND | | 5.8 | ug/kg | 0.47 |
| Bromomethane | ND | | 5.8 | ug/kg | 1.0 |
| 2-Butanone (MEK) | ND | | 12 | ug/kg | 1.6 |
| Carbon disulfide | ND | | 12 | ug/kg | 0.57 |
| Carbon tetrachloride | ND | | 5.8 | ug/kg | 0.62 |
| Chlorobenzene | ND | | 5.8 | ug/kg | 0.34 |
| Dibromochloromethane | ND | | 5.8 | ug/kg | 0.25 |
| Chloroethane | ND | | 5.8 | ug/kg | 0.53 |
| Chloroform | ND | | 5.8 | ug/kg | 0.30 |
| Chloromethane | ND | | 5.8 | ug/kg | 0.58 |
| 1,1-Dichloroethane | ND | | 5.8 | ug/kg | 0.34 |
| 1,2-Dichloroethane | ND | | 5.8 | ug/kg | 0.85 |
| cis-1,2-Dichloroethene | ND | | 5.8 | ug/kg | 1.0 |
| trans-1,2-Dichloroethene | ND | | 5.8 | ug/kg | 0.44 |
| 1,1-Dichloroethene | ND | | 5.8 | ug/kg | 0.30 |
| 1,2-Dichloropropane | ND | | 5.8 | ug/kg | 0.70 |
| cis-1,3-Dichloropropene | ND | | 5.8 | ug/kg | 0.75 |
| trans-1,3-Dichloropropene | ND | | 5.8 | ug/kg | 0.88 |
| Ethylbenzene | ND | | 5.8 | ug/kg | 0.40 |
| 2-Hexanone | ND | | 12 | ug/kg | 0.86 |
| Methylene chloride | ND | | 5.8 | ug/kg | 0.98 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 12 | ug/kg | 1.1 |
| Styrene | ND | | 5.8 | ug/kg | 0.36 |
| 1,1,2,2-Tetrachloroethane | ND | VJ | 5.8 | ug/kg | 0.79 |
| Tetrachloroethene | ND | | 5.8 | ug/kg | 0.71 |
| Toluene | ND | | 5.8 | ug/kg | 0.71 |
| 1,1,1-Trichloroethane | ND | | 5.8 | ug/kg | 0.42 |
| 1,1,2-Trichloroethane | ND | | 5.8 | ug/kg | 0.51 |
| Trichloroethene | ND | | 5.8 | ug/kg | 0.70 |
| Vinyl chloride | ND | | 5.8 | ug/kg | 0.42 |
| m-Xylene & p-Xylene | ND | | 5.8 | ug/kg | 0.95 |
| o-Xylene | ND | | 5.8 | ug/kg | 0.39 |

(Continued on next page)

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW16

GC/MS Volatiles

**Lot-Sample #...:** G9D010148-002 **Work Order #...:** K9EL71CA **Matrix.....:** SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 99 | (84 - 124) |
| 1,2-Dichloroethane-d4 | 106 | (65 - 142) |
| Toluene-d8 | 102 | (85 - 115) |
| 4-Bromofluorobenzene | 91 | (85 - 120) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39DW17**

**GC/MS Volatiles**

**Lot-Sample #...:** G9D010148-003 **Work Order #...:** K9EL81CA **Matrix.....:** SO
**Date Sampled...:** 03/31/09 **Date Received..:** 04/01/09
**Prep Date.....:** 04/04/09 **Analysis Date..:** 04/05/09
**Prep Batch #...:** 9095012
**Dilution Factor:** 1.04
**% Moisture.....:** 19 **Method.....:** SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 26 | ug/kg | 1.8 |
| Benzene | ND | 6.4 | ug/kg | 0.33 |
| Bromodichloromethane | ND | 6.4 | ug/kg | 0.68 |
| Bromoform | ND | 6.4 | ug/kg | 0.51 |
| Bromomethane | ND | 6.4 | ug/kg | 1.1 |
| 2-Butanone (MEK) | ND | 13 | ug/kg | 1.8 |
| Carbon disulfide | ND | 13 | ug/kg | 0.63 |
| Carbon tetrachloride | ND | 6.4 | ug/kg | 0.68 |
| Chlorobenzene | ND | 6.4 | ug/kg | 0.37 |
| Dibromochloromethane | ND | 6.4 | ug/kg | 0.27 |
| Chloroethane | ND | 6.4 | ug/kg | 0.58 |
| Chloroform | ND | 6.4 | ug/kg | 0.33 |
| Chloromethane | ND | 6.4 | ug/kg | 0.64 |
| 1,1-Dichloroethane | ND | 6.4 | ug/kg | 0.37 |
| 1,2-Dichloroethane | ND | 6.4 | ug/kg | 0.94 |
| cis-1,2-Dichloroethene | ND | 6.4 | ug/kg | 1.1 |
| trans-1,2-Dichloroethene | ND | 6.4 | ug/kg | 0.49 |
| 1,1-Dichloroethene | ND | 6.4 | ug/kg | 0.33 |
| 1,2-Dichloropropane | ND | 6.4 | ug/kg | 0.77 |
| cis-1,3-Dichloropropene | ND | 6.4 | ug/kg | 0.82 |
| trans-1,3-Dichloropropene | ND | 6.4 | ug/kg | 0.96 |
| Ethylbenzene | ND | 6.4 | ug/kg | 0.44 |
| 2-Hexanone | ND | 13 | ug/kg | 0.95 |
| Methylene chloride | ND | 6.4 | ug/kg | 1.1 |
| 4-Methyl-2-pentanone (MIBK) | ND | 13 | ug/kg | 1.2 |
| Styrene | ND | 6.4 | ug/kg | 0.40 |
| 1,1,2,2-Tetrachloroethane | ND VJ | 6.4 | ug/kg | 0.87 |
| Tetrachloroethene | ND | 6.4 | ug/kg | 0.78 |
| Toluene | ND | 6.4 | ug/kg | 0.78 |
| 1,1,1-Trichloroethane | ND | 6.4 | ug/kg | 0.46 |
| 1,1,2-Trichloroethane | ND | 6.4 | ug/kg | 0.56 |
| Trichloroethene | ND | 6.4 | ug/kg | 0.77 |
| Vinyl chloride | ND | 6.4 | ug/kg | 0.46 |
| m-Xylene & p-Xylene | ND | 6.4 | ug/kg | 1.0 |
| o-Xylene | ND | 6.4 | ug/kg | 0.42 |

(Continued on next page)

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39DW17

GC/MS Volatiles

**Lot-Sample #...:** G9D010148-003 **Work Order #...:** K9EL81CA **Matrix.....:** SO

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 100 | (84 - 124) |
| 1,2-Dichloroethane-d4 | 104 | (65 - 142) |
| Toluene-d8 | 101 | (85 - 115) |
| 4-Bromofluorobenzene | 93 | (85 - 120) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – TAL Metals
Test America Laboratories, Inc., SDG G9D280272

**DATE:** June 23, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU39 Removal Action on April 8, 2009, April 9, 2009, April 13, 2009, April 14, 2009, April 15, 2009, April 16, 2009, April 21, 2009, April 22, 2009, and April 23, 2009. Solid samples were analyzed for target analyte list (TAL) metals using USEPA SW-846 3050B/6010B for ICP metals and SW-846 7471A for mercury. A total of twenty four solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 39SC01 SSP-SW-1 0-1 | G9D280272-001 | 39SC12 SSP-FL-4A 0-1' | G9D280272-013 |
| 39SC02 SSP-SW-11 0-1' | G9D280272-002 | 39SC13 SSP-FL-3L 0-1' | G9D280272-014 |
| 39SC03 SSP-SW-21 0-1' | G9D280272-003 | 39SC14 NSP-SW-11 0-1' | G9D280272-015 |
| 39SC04 SSP-SW-33 0-1' | G9D280272-004 | 39SC15 NSP-SW-1S 0-1' | G9D280272-016 |
| 39SC05 SSP-SW-36 1-2' | G9D280272-005 | 39SC16 NSP-SW-22 0-1' | G9D280272-017 |
| 39SC06 SSP-SW-25 0-1' | G9D280272-006 | 39SC17 NSP-FL-1G 0-1' | G9D280272-018 |
| 39SC07 SSP-FL-1M 0-1' | G9D280272-007 | 39SC18 NSP-FL-2K 0-1' | G9D280272-019 |
| 39SC08 SSP-FL-2C 1-2' | G9D280272-008 | 39SC19 NSP-FL-3E 0-1' | G9D280272-020 |
| 39SC09 SSP-FL-3O 0-1' | G9D280272-009 | 39TMSC02 NSP-FL-3E 0-1' | G9D280272-021 |
| 39SC10 SSP-FL-3F 1-2' | G9D280272-010 | 39SC20 NSP-FL-2H 0-1' | G9D280272-022 |
| 39TMSC01 SSP-FL-3F 1-2' | G9D280272-011 | 39SC21 NSP-SW-28 0-1' | G9D280272-023 |
| 39SC11 SSP-FL-2H 0-1' | G9D280272-012 | 39SC22 NSP-FL-5D 0-1' | G9D280272-024 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Blank Analysis |
| | X | ICP Interference Check Sample (ICS) |
| | X | Laboratory Control Sample (LCS) |
| | X | Laboratory Sample Duplicate |
| X | | Matrix Spike and Spike Duplicate |
| X | | ICP Serial Dilution |
| X | | Field Sample Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

6/23/09
Date

**RFAAP VALIDATION REPORT**
**METALS REVIEW**
**SDG G9D280272**

## I-Holding Times and Preservation

The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: For solid matrices, the samples are shipped cool @4°C±2°C with a maximum holding time is 180 days for ICP metals and 28 days for mercury.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 04/08/09, 04/09/09, 04/13/09, 04/14/09, 04/15/09, 04/16/09, 04/21/09, 04/22/09, and 04/23/09, the coolers were received by the primary laboratory (Test America) on 04/28/09 at 6.0°C, 6.0°C, and 6.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 04/08/09, 04/09/09, 04/13/09, 04/14/09, 04/15/09, 04/16/09, 04/21/09, 04/22/09, and 04/23/09 for metals analysis. For solid samples, the soil samples were digested on 04/30/09 and analyzed on 05/04/09, 05/05/09, and 05/06/09 (arsenic and zinc) for ICP metals. Mercury was digested on 04/30/09 and analyzed on 05/01/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Initial and Continuing Calibration

Requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

| | | | |
|---|---|---|---|
| ICP: | 1- blank (DoD QSM <½ MRL) | Hg: | 1 – blank (DoD QSM <½ MRL) |
| | 3 – standards (r≥0.995) | | 5 – standards (r≥0.995) |
| | ICV/CCV (90-110%) (DoD QSM 90-110%) | | ICV/CCV (80-120%)(DoD QSM ICV 90-110% & CCV 80-120%) |
| | MRL (70-130%) (DoD QSM 80-120%) | | MRL (80-120%) (DoD QSM 80-120%) |
| | High Std. (95-105%) | | High Std. (95-105%) |

- The solid samples were analyzed for ICP metals on 05/04/09, 05/05/09, and 05/06/09 (arsenic and zinc). Mercury was analyzed for the solid samples on 05/01/09 with a correlation coefficient of 0.9999. All ICV/CCV/High Standard/MRL criteria were met for all metals and all runs. No qualifiers were applied.

## III-Blanks

Blanks (preparation and calibration blanks) are assessed to determine the existence and magnitude of contamination problems. No contaminants should be detected (i.e. <MDL) in any of the associated blanks. DoD QSM limits are <½MRL for the method blank and <2*MDL for the calibration blanks. Samples are qualified "B" when they are less than 5x the absolute value of the maximum blank concentration. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10 for ICP and Hg = 12) if needed.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | Analysis | QC Blank ID | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 05/04/09 | ICP-Sb | ICB/CCBs | 0.00116 | 0.0058 | None |
| 05/05/09 | ICP Metals | ICB/CCBs | <2*MDL | NA | None |
| 05/06/09 | ICP As & Zn | ICB/CCBs | <2*MDL | NA | None |
| 05/01/09 | Mercury | ICB/CCBs | <2*MDL | NA | None |
| 05/04/09 | ICP Metals | G9D300000-262 | <1/2*MRL | NA | None |
| 05/04/09 | ICP Metals | G9D300000-272 | <1/2*MRL | NA | None |
| 05/01/09 | Mercury | G9D030000-377 | <1/2*MRL | NA | None |
| 05/01/09 | Mercury | G9D030000-378 | <1/2*MRL | NA | None |

NA = Not Applicable
MDL = Method Detection Limit.
MRL = Method Reporting Limit.

**IV-ICP Interference Check Sample (ICS)**
The ICP interference check sample (ICS) verifies interelement and background correction factors. ICP Interference Check is performed at the beginning and end of each sample analysis run. Control limits are 80-120% (DoD QSM limits 80-120%).

- All criteria were met. No qualifiers were applied.

**V-Laboratory Control Samples (LCS)**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All aqueous LCS results must fall within the control limits. The DoD QSM solid LCS recovery limits are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9D300000-262 was used as solid LCS for ICP metals analysis on 05/04/09. All criteria were met. No qualifiers were applied. Samples 39SC01 SSP-SW-1 0-1 (G9D280272-001), 39SC02 SSP-SW-11 0-1' (G9D280272-002), 39SC03 SSP-SW-21 0-1' (G9D280272-003), 39SC04 SSP-SW-33 0-1' (G9D280272-004), 39SC05 SSP-SW-36 1-2' (G9D280272-005), 39SC06 SSP-SW-25 0-1' (G9D280272-006), 39SC07 SSP-FL-1M 0-1' (G9D280272-007), 39SC08 SSP-FL-2C 1-2' (G9D280272-008), 39SC09 SSP-FL-3O 0-1' (G9D280272-009), 39SC10 SSP-FL-3F 1-2' (G9D280272-010), 39TMSC01 SSP-FL-3F 1-2' (G9D280272-011), 39SC11 SSP-FL-2H 0-1' (G9D280272-012), 39SC12 SSP-FL-4A 0-1' (G9D280272-013), and 39SC13 SSP-FL-3L 0-1' (G9D280272-014) apply to this LCS.

- Sample G9D300000-272 was used as solid LCS for ICP metals analysis on 05/04/09. All criteria were met. No qualifiers were applied. Samples 39SC14 NSP-SW-11 0-1' (G9D280272-015), 39SC15 NSP-SW-1S 0-1' (G9D280272-016), 39SC16 NSP-SW-22 0-1' (G9D280272-017), 39SC17 NSP-FL-1G 0-1' (G9D280272-018), 39SC18 NSP-FL-2K 0-1' (G9D280272-019), 39SC19 NSP-FL-3E 0-1' (G9D280272-020), 39TMSC02 NSP-FL-3E 0-1' (G9D280272-021), 39SC20 NSP-FL-2H 0-1' (G9D280272-022), 39SC21 NSP-SW-28 0-1' (G9D280272-023), and 39SC22 NSP-FL-5D 0-1' (G9D280272-024) apply to this LCS.

- Sample G9D030000-377 was used as solid LCS for mercury analysis on 05/01/09. All criteria were met. No qualifiers were applied. Samples 39SC01 SSP-SW-1 0-1 (G9D280272-001), 39SC02 SSP-SW-11 0-1' (G9D280272-002), 39SC03 SSP-SW-21 0-1' (G9D280272-003), 39SC04 SSP-SW-33 0-1' (G9D280272-004), 39SC05 SSP-SW-36 1-2' (G9D280272-005), 39SC06 SSP-SW-25 0-1' (G9D280272-006), 39SC07 SSP-FL-1M 0-1' (G9D280272-007), 39SC08 SSP-FL-2C 1-2' (G9D280272-008), 39SC09 SSP-FL-3O 0-1' (G9D280272-009), 39SC10 SSP-FL-3F 1-2' (G9D280272-010), 39TMSC01 SSP-FL-3F 1-2' (G9D280272-011), 39SC11 SSP-FL-2H 0-1' (G9D280272-012), 39SC12 SSP-FL-4A 0-1' (G9D280272-013), 39SC13 SSP-FL-3L 0-1' (G9D280272-014), and 39SC14 NSP-SW-11 0-1' (G9D280272-015) apply to this LCS.

- Sample G9D030000-378 was used as solid LCS for mercury analysis on 05/01/09. All criteria were met. No qualifiers were applied. Samples 39SC15 NSP-SW-1S 0-1' (G9D280272-016), 39SC16 NSP-SW-22 0-1' (G9D280272-017), 39SC17 NSP-FL-1G 0-1' (G9D280272-018), 39SC18 NSP-FL-2K 0-1' (G9D280272-019), 39SC19 NSP-FL-3E 0-1' (G9D280272-020), 39TMSC02 NSP-FL-3E 0-1' (G9D280272-021), 39SC20 NSP-FL-2H 0-1' (G9D280272-022), 39SC21 NSP-SW-28 0-1' (G9D280272-023), and 39SC22 NSP-FL-5D 0-1' (G9D280272-024) apply to this LCS.

**VI-Laboratory Duplicate Sample Analysis**

Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits. DoD QSM limits for metals are 20% RPD for ICP metals and mercury.

- No laboratory duplicate was analyzed. Laboratory precision was evaluated using the Matrix Spike and Matrix Spike Duplicate (Section VII).

**VII-Matrix Spike/Spike Duplicate**

MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Specific criteria include the analyses of matrix spike and matrix spike duplicate samples at a frequency of one MS and MSD per 20 samples of similar matrix. MS and MSD recoveries and relative percent differences between MS and MSD recoveries should be within the specified limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used. Post digestion spikes limits are 75-125% for ICP metals and mercury.

- Sample 39SC01 SSP-SW-1 0-1 (G9D280272-001) was used as solid laboratory MS/MSD for ICP metals analysis on 05/04-06/09. Aluminum (2040%, 1730%), antimony (32%, 33%), arsenic (78%, 77%), iron (294%, 0.0%), lead (79%), manganese (166%, 139%), selenium (77%, 74%), and thallium (77%, 77%) were outside criteria. All other recoveries and RPD values were within criteria. The associated LCS (Section V) was within criteria. The sample concentration was >4 times the spike added for aluminum, iron, and manganese; therefore, no qualifiers were applied based upon these outliers. Antimony, arsenic, lead, selenium, and thallium were qualified bias low "L" for detects and "UL" for non-detects based upon the low recoveries. All other metals were within criteria. Samples 39SC01 SSP-SW-1 0-1 (G9D280272-001), 39SC02 SSP-SW-11 0-1' (G9D280272-002), 39SC03 SSP-SW-21 0-1' (G9D280272-003), 39SC04 SSP-SW-33 0-1' (G9D280272-004), 39SC05 SSP-SW-36 1-2' (G9D280272-005), 39SC06 SSP-SW-25 0-1' (G9D280272-006), 39SC07 SSP-FL-1M 0-1' (G9D280272-007), 39SC08 SSP-FL-2C 1-2' (G9D280272-008), 39SC09 SSP-FL-3O 0-1' (G9D280272-009), 39SC10 SSP-FL-3F 1-2' (G9D280272-010), 39TMSC01 SSP-FL-3F 1-2' (G9D280272-011), 39SC11 SSP-FL-2H 0-1' (G9D280272-012), 39SC12 SSP-FL-4A 0-1' (G9D280272-013), and 39SC13 SSP-FL-3L 0-1' (G9D280272-014) apply to this MS/MSD.

- Sample 39SC14 NSP-SW-11 0-1' (G9D280272-015) was used as solid laboratory MS/MSD for ICP metals analysis on 05/04-06/09. Aluminum (1910%, 1910%), antimony (34%, 36%), arsenic (79%, 79%), iron (1920%, 1930%), manganese (266%, 148%), and selenium (76%, 77%) were outside criteria. All other recoveries and RPD values were within criteria. The associated LCS (Section V) was within criteria. The sample concentration was >4 times the spike added for aluminum, iron, and manganese; therefore, no qualifiers were applied based upon these outliers. Antimony, arsenic, and selenium were qualified bias low "L" for detects and "UL" for non-detects based upon the low recoveries. All other metals were within criteria. Samples 39SC14 NSP-SW-11 0-1' (G9D280272-015), 39SC15 NSP-SW-1S 0-1' (G9D280272-016), 39SC16 NSP-SW-22 0-1' (G9D280272-017), 39SC17 NSP-FL-1G 0-1' (G9D280272-018), 39SC18 NSP-FL-2K 0-1' (G9D280272-019), 39SC19 NSP-FL-3E 0-1' (G9D280272-020), 39TMSC02 NSP-FL-3E 0-1' (G9D280272-021), 39SC20 NSP-FL-2H 0-1' (G9D280272-022), 39SC21 NSP-SW-28 0-1' (G9D280272-023), and 39SC22 NSP-FL-5D 0-1' (G9D280272-024) apply to this MS/MSD.

- Sample 39SC01 SSP-SW-1 0-1 (G9D280272-001) was used as solid MS/MSD for mercury analysis on 05/01/09. All criteria were met. No qualifiers were applied. Samples 39SC01 SSP-SW-1 0-1 (G9D280272-001), 39SC02 SSP-SW-11 0-1' (G9D280272-002), 39SC03 SSP-SW-21 0-1' (G9D280272-003), 39SC04 SSP-SW-33 0-1' (G9D280272-004), 39SC05 SSP-SW-36 1-2' (G9D280272-005), 39SC06 SSP-SW-25 0-1' (G9D280272-006), 39SC07 SSP-FL-1M 0-1' (G9D280272-007), 39SC08 SSP-FL-2C 1-2' (G9D280272-008), 39SC09 SSP-FL-3O 0-1' (G9D280272-009), 39SC10 SSP-FL-3F 1-2' (G9D280272-010), 39TMSC01 SSP-FL-3F 1-2' (G9D280272-011), 39SC11 SSP-FL-2H 0-1' (G9D280272-012), 39SC12 SSP-FL-4A 0-1' (G9D280272-013), 39SC13 SSP-FL-3L 0-1' (G9D280272-014), and 39SC14 NSP-SW-11 0-1' (G9D280272-015) apply to this MS/MSD.

- Sample 39SC15 NSP-SW-1S 0-1' (G9D280272-016) was used as solid MS/MSD for mercury analysis on 05/01/09. All criteria were met. No qualifiers were applied. Samples 39SC15 NSP-SW-1S 0-1' (G9D280272-016), 39SC16 NSP-SW-22 0-1' (G9D280272-017), 39SC17 NSP-FL-1G 0-1' (G9D280272-018), 39SC18 NSP-FL-2K 0-1' (G9D280272-019), 39SC19 NSP-FL-3E 0-1' (G9D280272-020), 39TMSC02 NSP-FL-3E 0-1' (G9D280272-021), 39SC20 NSP-FL-2H 0-1' (G9D280272-022), 39SC21 NSP-SW-28 0-1' (G9D280272-023), and 39SC22 NSP-FL-5D 0-1' (G9D280272-024) apply to this MS/MSD.

**VIII-ICP Serial Dilution**

An ICP serial dilution is performed to determine whether significant physical or chemical interferences exist due to sample matrix at high concentrations. An analysis of a 5-fold dilution should agree within 10% difference of the original result when the concentration in sample is a factor of 50 above MDL.

- The serial dilution for ICP metals was analyzed on 05/04/09 using solid sample 39SC01 SSP-SW-1 0-1 (G9D280272-001). Arsenic (33.7%), barium (12.1%), calcium (10.8%), chromium (13.8%), magnesium (12.4%), manganese (11.4%), nickel (11.2%), lead (11.1%), zinc (12.5%), aluminum (11.1%), cadmium (49.7%), cobalt (10.6%), iron (12.3%), sodium (48.4%), and vanadium (11.1%) were outside of criteria limits for the 05/04/09 run. Only antimony and thallium were reported for this serial dilution; therefore, no qualifiers were applied based upon these outliers. Arsenic (15.4%), lead (23.1%), antimony (559%), selenium (739%), thallium (466%), beryllium (22.7%), and sodium (58.2%) were outside of criteria limits for the 05/05/09 run. All TAL metals except for antimony and thallium were reported for this serial dilution. Sample concentrations were <50 times MDL for arsenic, lead, selenium, thallium, beryllium, and sodium; therefore, no qualifiers were applied based upon these outliers. All criteria were met. No qualifiers were applied. Samples 39SC01 SSP-SW-1 0-1 (G9D280272-001), 39SC02 SSP-SW-11 0-1' (G9D280272-002), 39SC03 SSP-SW-21 0-1' (G9D280272-003), 39SC04 SSP-SW-33 0-1' (G9D280272-004), 39SC05 SSP-SW-36 1-2' (G9D280272-005), 39SC06 SSP-SW-25 0-1' (G9D280272-006), 39SC07 SSP-FL-1M 0-1' (G9D280272-007), 39SC08 SSP-FL-2C 1-2' (G9D280272-008), 39SC09 SSP-FL-3O 0-1' (G9D280272-009), 39SC10 SSP-FL-3F 1-2' (G9D280272-010), 39TMSC01 SSP-FL-3F 1-2' (G9D280272-011), 39SC11 SSP-FL-2H 0-1' (G9D280272-012), 39SC12 SSP-FL-4A 0-1' (G9D280272-013), and 39SC13 SSP-FL-3L 0-1' (G9D280272-014) apply to this serial dilution.

- The serial dilution for ICP metals was analyzed on 05/04/09 using solid sample 39SC14 NSP-SW-11 0-1' (G9D280272-015). Arsenic (84.2%), antimony (1360%), thallium (26.1%), cadmium (85.6%), iron (13.2%), and sodium (50.9%) were outside of criteria limits for the 05/04/09 run. All TAL metals except zinc were reported for this serial dilution. Sample concentrations were <50 times MDL for arsenic, antimony, thallium, cadmium, and sodium; therefore, no qualifiers were applied based upon these outliers. Iron was qualified estimated "J" for all detects based upon the high %D. Antimony (805%), thallium (106%), cadmium (21.0%), and sodium (71.3%) were outside of criteria limits for the 05/05/09 run. Only zinc was reported for this serial dilution; therefore, no qualifiers were applied based upon these outliers. All criteria were met. No qualifiers were applied. Samples 39SC14 NSP-SW-11 0-1' (G9D280272-015), 39SC15 NSP-SW-1S 0-1' (G9D280272-016), 39SC16 NSP-SW-22 0-1' (G9D280272-017), 39SC17 NSP-FL-1G 0-1' (G9D280272-018), 39SC18 NSP-FL-2K 0-1' (G9D280272-019), 39SC19 NSP-FL-3E 0-1' (G9D280272-020), 39TMSC02 NSP-FL-3E 0-1' (G9D280272-021), 39SC20 NSP-FL-2H 0-1' (G9D280272-022), 39SC21 NSP-SW-28 0-1' (G9D280272-023), and 39SC22 NSP-FL-5D 0-1' (G9D280272-024 apply to this serial dilution.

- The serial dilution for mercury was analyzed on 05/01/09 using solid sample 39SC01 SSP-SW-1 0-1 (G9D280272-001). All criteria were met. No qualifiers were applied. Samples 39SC01 SSP-SW-1 0-1 (G9D280272-001), 39SC02 SSP-SW-11 0-1' (G9D280272-002), 39SC03 SSP-SW-21 0-1' (G9D280272-003), 39SC04 SSP-SW-33 0-1' (G9D280272-004), 39SC05 SSP-SW-36 1-2' (G9D280272-005), 39SC06 SSP-SW-25 0-1' (G9D280272-006), 39SC07 SSP-FL-1M 0-1' (G9D280272-007), 39SC08 SSP-FL-2C 1-2' (G9D280272-008), 39SC09 SSP-FL-3O 0-1' (G9D280272-009), 39SC10 SSP-FL-3F 1-2' (G9D280272-010), 39TMSC01 SSP-FL-3F 1-2' (G9D280272-011), 39SC11 SSP-FL-2H 0-1' (G9D280272-012), 39SC12 SSP-FL-4A 0-1' (G9D280272-013), 39SC13 SSP-FL-3L 0-1' (G9D280272-014), and 39SC14 NSP-SW-11 0-1' (G9D280272-015) apply to this serial dilution.

- The serial dilution for mercury was analyzed on 05/01/09 using solid sample 39SC15 NSP-SW-1S 0-1' (G9D280272-016). All criteria were met. No qualifiers were applied. Samples 39SC15 NSP-SW-1S 0-1' (G9D280272-016), 39SC16 NSP-SW-22 0-1' (G9D280272-017), 39SC17 NSP-FL-1G 0-1' (G9D280272-018), 39SC18 NSP-FL-2K 0-1' (G9D280272-019), 39SC19 NSP-FL-3E 0-1' (G9D280272-020), 39TMSC02 NSP-FL-3E 0-1' (G9D280272-021), 39SC20 NSP-FL-2H 0-1' (G9D280272-022), 39SC21 NSP-SW-28 0-1' (G9D280272-023), and 39SC22 NSP-FL-5D 0-1' (G9D280272-024) apply to this serial dilution.

**IX-Field Duplicate Sample Analysis**

Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 35% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- Field soil sample duplicate pair 39SC10 SSP-FL-3F 1-2' (G9D280272-010) and 39TMSC01 SSP-FL-3F 1-2' (G9D280272-011) was collected for TAL metals. All detected TAL metals found in the sample and its duplicate pair and associated %RPD are noted in **Table 3**. All other TAL metals target compounds were non-detect. Chromium (38.5%) was above criteria and was qualified estimated "J" based upon the high RPD. For all other target metals, all criteria were met.

**Table 3 Field Precision Hits Analysis Summary for TAL Metals for Duplicate Pair 39SC10 SSP-FL-3F 1-2' (G9D280272-010) and 39TMSC01 SSP-FL-3F 1-2' (G9D280272-011)**

| Compound | Original Sample (mg/kg) | Duplicate Pair (mg/kg) | %RPD |
|---|---|---|---|
| Mercury | 0.035B | 0.033B | 5.9 |
| Arsenic | 3.7 | 3.8 | 2.7 |
| Iron | 38100 | 31100 | 20.2 |
| Lead | 11.5 | 10.9 | 5.4 |
| Magnesium | 3650 | 3690 | 1.1 |
| Manganese | 418 | 374 | 11.1 |
| Barium | 72.6 | 66.6 | 8.6 |
| Nickel | 19.8 | 16.7 | 17.0 |
| Potassium | 2240 | 2070 | 7.9 |
| Beryllium | 1.0 | 0.91 | 7.9 |
| Sodium | 42.9B | 38.4B | 11.1 |
| Thallium | 1.3B | 1.1B | 16.7 |
| Vanadium | 61.9 | 52.7 | 16.1 |
| Chromium | 45.5 | 30.8 | 38.5 |
| Calcium | 656 | 556 | 16.5 |
| Cobalt | 15.5 | 15.1 | 2.6 |
| Copper | 21.8 | 19.6 | 10.6 |
| Aluminum | 23800 | 19300 | 20.9 |
| Zinc | 63.4 | 58.0 | 8.9 |

B = Estimated value <MRL and >MDL. Data point qualified was estimated "J".

- Field soil sample duplicate pair 39SC19 NSP-FL-3E 0-1' (G9D280272-020) and 39TMSC02 NSP-FL-3E 0-1' (G9D280272-021) was collected for TAL metals. All detected TAL metals found in the sample and its duplicate pair and associated %RPD are noted in **Table 4**. All other TAL metals target compounds were non-detect. Arsenic (62.1%) was above criteria and was qualified estimated "J" based upon the high RPD. For all other target metals, all criteria were met.

**Table 4 Field Precision Hits Analysis Summary for TAL Metals for Duplicate Pair 39SC19 NSP-FL-3E 0-1' (G9D280272-020) and 39TMSC02 NSP-FL-3E 0-1' (G9D280272-021)**

| Compound | Original Sample (mg/kg) | Duplicate Pair (mg/kg) | %RPD |
|---|---|---|---|
| Mercury | 0.027B | 0.032B | 17.0 |
| Iron | 27300 | 27600 | 1.1 |
| Lead | 11.4 | 11.4 | 0.0 |
| Magnesium | 4170 | 4140 | 0.7 |
| Manganese | 529 | 527 | 0.4 |
| Barium | 93.9 | 95.4 | 1.6 |
| Nickel | 15.8 | 16.5 | 4.3 |
| Potassium | 2400 | 2450 | 2.1 |
| Beryllium | 0.91 | 0.89 | 2.2 |
| Sodium | 48.6B | 46.7B | 4.0 |
| Thallium | 0.96B | 1.3B | 30.1 |
| Vanadium | 50.0 | 50.9 | 1.8 |
| Chromium | 24.9 | 26.2 | 5.1 |
| Calcium | 790 | 781 | 1.2 |
| Cobalt | 11.8 | 11.9 | 0.8 |
| Copper | 18.5 | 21.6 | 15.5 |
| Aluminum | 17900 | 18200 | 1.7 |
| Arsenic | 2.0B | 3.8 | 62.1 |
| Zinc | 55.9 | 57.7 | 3.2 |

B = Estimated value <MRL and >MDL. Data point qualified was estimated "J".

**X-Quantitation Verification**

The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification.

**Sample: 39SC01 SSP-SW-1 0-1 (G9D280272-001), Barium**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(674.76 µg/L)*(0.100 L)*(2)} / {(1.05 g)*(0.8110)} = 158 µg/g = 158 mg/kg

Reported concentration = 159 mg/kg
%D = 0.6%
Values were within 10% difference.

**Sample: 39SC01 SSP-SW-1 0-1 (G9D280272-001), Mercury**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(0.260 µg/L)*(0.050 L)*(1)} / {(0.60 g)*(0.8110)} = 0.027 µg/g = 0.027 mg/kg

Reported concentration = 0.027 mg/kg
%D = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC01 SSP-SW-1 0-1

TOTAL Metals

Lot-Sample #...: G9D280272-001 Matrix.....: SO
Date Sampled...: 04/14/09 Date Received..: 04/28/09
% Moisture.....: 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | |
| Silver | ND | 1.2<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 0.25 | 04/30-05/05/09 | LA0CX1AA |
| Aluminum | 15700 | 51.8<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 17.3 | 04/30-05/05/09 | LA0CX1AC |
| Arsenic | 2.8 B L | 5.2<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 1.7 | 04/30-05/05/09 | LA0CX1AD |
| Barium | 159 | 4.9<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 0.99 | 04/30-05/05/09 | LA0CX1AE |
| Beryllium | 1.0 | 0.74<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 0.25 | 04/30-05/05/09 | LA0CX1AF |
| Calcium | 1410 | 247<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 61.7 | 04/30-05/05/09 | LA0CX1AG |
| Cadmium | ND | 0.74<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 0.25 | 04/30-05/05/09 | LA0CX1AH |
| Cobalt | 13.6 | 1.5<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 04/30-05/05/09 | LA0CX1AJ |
| Chromium | 24.8 | 3.0<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 0.99 | 04/30-05/05/09 | LA0CX1AK |
| Copper | 11.4 | 6.2<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 1.2 | 04/30-05/05/09 | LA0CX1AL |
| Iron | 21100 | 24.7<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 7.6 | 04/30-05/05/09 | LA0CX1AM |
| Potassium | 1210 | 247<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 61.7 | 04/30-05/05/09 | LA0CX1AN |
| Magnesium | 2790 | 123<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 18.5 | 04/30-05/05/09 | LA0CX1AP |
| Manganese | 963 | 3.0<br>Dilution Factor: 2 | mg/kg | SW846 6010B<br>MDL.....: 0.99 | 04/30-05/05/09 | LA0CX1AQ |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC01 SSP-SW-1 0-1

TOTAL Metals

Lot-Sample #...: G9D280272-001 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | ND | 1230 | mg/kg | SW846 6010B | 04/30-05/05/09 | LA0CX1AR |
| | | Dilution Factor: 2 | | MDL.....: 61.7 | | |
| Nickel | 13.2 | 2.5 | mg/kg | SW846 6010B | 04/30-05/05/09 | LA0CX1AT |
| | | Dilution Factor: 2 | | MDL.....: 0.74 | | |
| Lead | 18.1 L | 4.9 | mg/kg | SW846 6010B | 04/30-05/05/09 | LA0CX1AU |
| | | Dilution Factor: 2 | | MDL.....: 1.5 | | |
| Antimony | ND VL | 1.9 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0CX1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.62 | | |
| Selenium | ND VL | 4.9 | mg/kg | SW846 6010B | 04/30-05/05/09 | LA0CX1AW |
| | | Dilution Factor: 2 | | MDL.....: 1.5 | | |
| Thallium | 0.99 B L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0CX1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.62 | | |
| Vanadium | 39.2 | 2.5 | mg/kg | SW846 6010B | 04/30-05/05/09 | LA0CX1A0 |
| | | Dilution Factor: 2 | | MDL.....: 0.74 | | |
| Zinc | 54.5 | 7.4 | mg/kg | SW846 6010B | 04/30-05/05/09 | LA0CX1A1 |
| | | Dilution Factor: 2 | | MDL.....: 1.5 | | |
| Prep Batch #...: 9120377 | | | | | | |
| Mercury | 0.027 B J | 0.049 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0CX1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC02 SSP-SW-11 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-002 Matrix.....: SO
Date Sampled...: 04/08/09 Date Received..: 04/28/09
% Moisture.....: 15

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | |
| Silver | ND | 0.59<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0C71AF |
| Aluminum | 13700 | 24.6<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.2 | 04/30-05/04/09 | LA0C71AG |
| Arsenic | 5.3 L | 2.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.82 | 04/30-05/04/09 | LA0C71AH |
| Barium | 90.3 | 2.3<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.47 | 04/30-05/04/09 | LA0C71AJ |
| Beryllium | 0.68 | 0.35<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0C71AK |
| Calcium | 629 | 117<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 29.3 | 04/30-05/04/09 | LA0C71AL |
| Cadmium | ND | 0.35<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0C71AM |
| Cobalt | 11.6 | 0.70<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.23 | 04/30-05/04/09 | LA0C71AN |
| Chromium | 19.1 | 1.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.47 | 04/30-05/04/09 | LA0C71AP |
| Copper | 10.4 | 2.9<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.59 | 04/30-05/04/09 | LA0C71AQ |
| Iron | 20400 | 11.7<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.6 | 04/30-05/04/09 | LA0C71AR |
| Potassium | 1120 | 117<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 29.3 | 04/30-05/04/09 | LA0C71AT |
| Magnesium | 2040 | 58.6<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.8 | 04/30-05/04/09 | LA0C71AU |
| Manganese | 951 | 1.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.47 | 04/30-05/04/09 | LA0C71AV |

(Continued on next page)

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC02 SSP-SW-11 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-002 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 31.1 B | J | 586 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0C71AW |
| | | | Dilution Factor: 1 | | MDL.....: 29.3 | | |
| Nickel | 10.6 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0C71AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.35 | | |
| Lead | 16.6 | L | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0C71A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Antimony | ND | UL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0C71A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.59 | | |
| Selenium | ND | UL | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0C71A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Thallium | ND | UL | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0C71A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.59 | | |
| Vanadium | 37.4 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0C71AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.35 | | |
| Zinc | 51.6 | | 3.5 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0C71AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.039 B | J | 0.047 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0C71AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39SC03 SSP-SW-21 0-1'**

**TOTAL Metals**

**Lot-Sample #...:** G9D280272-003 **Matrix.....:** SO
**Date Sampled...:** 04/21/09 **Date Received..:** 04/28/09
**% Moisture.....:** 19

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9120262 | | | | | | |
| Silver | ND | 0.61 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0DF1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Aluminum** | **20800** | **25.8** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AG** |
| | | Dilution Factor: 1 | | MDL.....: 8.6 | | |
| **Arsenic** | **3.6** L | **2.6** | **mg/kg** | **SW846 6010B** | **04/30-05/06/09** | **LA0DF1AH** |
| | | Dilution Factor: 1 | | MDL.....: 0.86 | | |
| **Barium** | **106** | **2.5** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Beryllium** | **0.93** | **0.37** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AK** |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Calcium** | **979** | **123** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AL** |
| | | Dilution Factor: 1 | | MDL.....: 30.7 | | |
| Cadmium | ND | 0.37 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0DF1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Cobalt** | **13.5** | **0.74** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AN** |
| | | Dilution Factor: 1 | | MDL.....: 0.25 | | |
| **Chromium** | **30.0** | **1.5** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AP** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| **Copper** | **25.2** | **3.1** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AQ** |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| **Iron** | **28500** | **12.3** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AR** |
| | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| **Potassium** | **1720** | **123** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AT** |
| | | Dilution Factor: 1 | | MDL.....: 30.7 | | |
| **Magnesium** | **3620** | **61.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AU** |
| | | Dilution Factor: 1 | | MDL.....: 9.2 | | |
| **Manganese** | **285** | **1.5** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0DF1AV** |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC03 SSP-SW-21 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-003 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 40.9 B | J | 614 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0DF1AW |
| | | | Dilution Factor: 1 | | MDL.....: 30.7 | | |
| Nickel | 15.4 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0DF1AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Lead | 83.6 | L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0DF1A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Antimony | ND | UL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0DF1A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND | UL | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0DF1A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Thallium | ND | UL | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0DF1A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Vanadium | 54.5 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0DF1AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Zinc | 59.6 | | 3.7 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0DF1AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.055 | | 0.049 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0DF1AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39SC04 SSP-SW-33 0-1'**

**TOTAL Metals**

**Lot-Sample #...:** G9D280272-004 **Matrix.....:** SO
**Date Sampled...:** 04/22/09 **Date Received..:** 04/28/09
**% Moisture.....:** 17

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9120262 | | | | | | | |
| Silver | ND | | 0.61 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EJ1AF |
| | | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Aluminum** | **15900** | | **25.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AG** |
| | | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| **Arsenic** | **3.5** | **L** | **2.5** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AH** |
| | | | Dilution Factor: 1 | | MDL.....: 0.85 | | |
| **Barium** | **108** | | **2.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AJ** |
| | | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| **Beryllium** | **0.85** | | **0.36** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AK** |
| | | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Calcium** | **1420** | | **121** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AL** |
| | | | Dilution Factor: 1 | | MDL.....: 30.3 | | |
| Cadmium | ND | | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EJ1AM |
| | | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Cobalt** | **11.0** | | **0.73** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AN** |
| | | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| **Chromium** | **28.8** | | **1.5** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AP** |
| | | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| **Copper** | **14.8** | | **3.0** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AQ** |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| **Iron** | **21000** | | **12.1** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AR** |
| | | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| **Potassium** | **1510** | | **121** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AT** |
| | | | Dilution Factor: 1 | | MDL.....: 30.3 | | |
| **Magnesium** | **2730** | | **60.5** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AU** |
| | | | Dilution Factor: 1 | | MDL.....: 9.1 | | |
| **Manganese** | **345** | | **1.5** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AV** |
| | | | Dilution Factor: 1 | | MDL.....: 0.48 | | |

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**Shaw E & I Inc**

**Client Sample ID: 39SC04 SSP-SW-33 0-1'**

**TOTAL Metals**

**Lot-Sample #...:** G9D280272-004 **Matrix.....:** SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| **Sodium** | **49.8 B** | J | **605** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AW** |
| | | | Dilution Factor: 1 | | MDL.....: 30.3 | | |
| **Nickel** | **12.9** | | **1.2** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AX** |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| **Lead** | **50.9** | L | **2.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1A0** |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND | VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EJ1A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND | VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EJ1A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| **Thallium** | **1.0 B** | L | **2.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1A3** |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| **Vanadium** | **40.6** | | **1.2** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0EJ1AA** |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| **Zinc** | **55.1** | | **3.6** | **mg/kg** | **SW846 6010B** | **04/30-05/06/09** | **LA0EJ1AC** |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| **Prep Batch #...:** 9120377 | | | | | | | |
| **Mercury** | **0.030 B** | J | **0.048** | **mg/kg** | **SW846 7471A** | **04/30-05/01/09** | **LA0EJ1AD** |
| | | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC05 SSP-SW-36 1-2'

. TOTAL Metals

Lot-Sample #...: G9D280272-005 Matrix.....: SO
Date Sampled...: 04/23/09 Date Received..: 04/28/09
% Moisture.....: 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | |
| Silver | ND | 0.60 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 15200 | 25.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AG |
| | | Dilution Factor: 1 | | MDL.....: 8.4 | | |
| Arsenic | 3.9 L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.84 | | |
| Barium | 103 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Beryllium | 0.82 | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 809 | 120 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AL |
| | | Dilution Factor: 1 | | MDL.....: 30.0 | | |
| Cadmium | ND | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 11.5 | 0.72 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AN |
| | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| Chromium | 20.2 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AP |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Copper | 9.7 | 3.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Iron | 17600 | 12.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AR |
| | | Dilution Factor: 1 | | MDL.....: 3.7 | | |
| Potassium | 948 | 120 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AT |
| | | Dilution Factor: 1 | | MDL.....: 30.0 | | |
| Magnesium | 1780 | 60.1 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AU |
| | | Dilution Factor: 1 | | MDL.....: 9.0 | | |
| Manganese | 763 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC05 SSP-SW-36 1-2'

TOTAL Metals

Lot-Sample #...: G9D280272-005 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 40.3 B J | 601 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AW |
| | | Dilution Factor: 1 | | MDL.....: 30.0 | | |
| Nickel | 10.0 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 13.1 L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1A0 |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Selenium | ND VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Thallium | 0.78 B L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Vanadium | 36.2 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EL1AA |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 45.2 | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0EL1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Prep Batch #...: 9120377 | | | | | | |
| Mercury | 0.049 | 0.048 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0EL1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC06 SSP-SW-25 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-006
Date Sampled...: 04/22/09 Date Received..: 04/28/09
% Moisture.....: 18
Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | |
| Silver | ND | 0.61<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0EN1AF |
| Aluminum | 18200 | 25.6<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.5 | 04/30-05/04/09 | LA0EN1AG |
| Arsenic | 2.7 L | 2.6<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.85 | 04/30-05/06/09 | LA0EN1AH |
| Barium | 88.1 | 2.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 04/30-05/04/09 | LA0EN1AJ |
| Beryllium | 0.95 | 0.37<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0EN1AK |
| Calcium | 520 | 122<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.5 | 04/30-05/04/09 | LA0EN1AL |
| Cadmium | ND | 0.37<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0EN1AM |
| Cobalt | 11.1 | 0.73<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.24 | 04/30-05/04/09 | LA0EN1AN |
| Chromium | 27.6 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 04/30-05/04/09 | LA0EN1AP |
| Copper | 29.2 | 3.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.61 | 04/30-05/04/09 | LA0EN1AQ |
| Iron | 26100 | 12.2<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.8 | 04/30-05/04/09 | LA0EN1AR |
| Potassium | 1990 | 122<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.5 | 04/30-05/04/09 | LA0EN1AT |
| Magnesium | 3390 | 61.0<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 9.2 | 04/30-05/04/09 | LA0EN1AU |
| Manganese | 149 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 04/30-05/04/09 | LA0EN1AV |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC06 SSP-SW-25 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-006 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 37.3 B | J | 610 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EN1AW |
| | | | Dilution Factor: 1 | | MDL.....: 30.5 | | |
| Nickel | 15.2 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EN1AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Lead | 99.8 | L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EN1A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND | UL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EN1A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND | UL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EN1A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Thallium | 0.63 B | L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EN1A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Vanadium | 49.9 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EN1AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Zinc | 55.5 | | 3.7 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0EN1AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.037 B | J | 0.049 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0EN1AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC07 SSP-FL-1M 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-007
Date Sampled...: 04/16/09 Date Received..: 04/28/09
% Moisture.....: 19
Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | |
| Silver | ND | 0.62<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0EP1AF |
| Aluminum | 25100 | 26.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.7 | 04/30-05/04/09 | LA0EP1AG |
| Arsenic | 5.1 L | 2.6<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.87 | 04/30-05/04/09 | LA0EP1AH |
| Barium | 103 | 2.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.50 | 04/30-05/04/09 | LA0EP1AJ |
| Beryllium | 1.2 | 0.37<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0EP1AK |
| Calcium | 1090 | 124<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 31.0 | 04/30-05/04/09 | LA0EP1AL |
| Cadmium | ND | 0.37<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0EP1AM |
| Cobalt | 13.8 | 0.74<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.25 | 04/30-05/04/09 | LA0EP1AN |
| Chromium | 40.0 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.50 | 04/30-05/04/09 | LA0EP1AP |
| Copper | 24.1 | 3.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.62 | 04/30-05/04/09 | LA0EP1AQ |
| Iron | 35100 | 12.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.8 | 04/30-05/04/09 | LA0EP1AR |
| Potassium | 2010 | 124<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 31.0 | 04/30-05/04/09 | LA0EP1AT |
| Magnesium | 4470 | 62.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 9.3 | 04/30-05/04/09 | LA0EP1AU |
| Manganese | 631 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.50 | 04/30-05/04/09 | LA0EP1AV |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC07 SSP-FL-1M 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-007 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 60.9 B | J | 621 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EP1AW |
| | | | Dilution Factor: 1 | | MDL.....: 31.0 | | |
| Nickel | 19.3 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EP1AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Lead | 15.1 | L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EP1A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Antimony | ND | UL | 1.9 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EP1A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.62 | | |
| Selenium | ND | UL | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EP1A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Thallium | 1.2 B | L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EP1A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.62 | | |
| Vanadium | 66.4 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0EP1AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Zinc | 71.4 | | 3.7 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0EP1AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.051 | | 0.050 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0EP1AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC08 SSP-FL-2C 1-2'

TOTAL Metals

Lot-Sample #...: G9D280272-008
Date Sampled...: 04/21/09 Date Received..: 04/28/09
% Moisture.....: 20
Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | | |
| Silver | ND | | 0.62<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0E51AF |
| Aluminum | 28700 | | 26.2<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.7 | 04/30-05/04/09 | LA0E51AG |
| Arsenic | 4.4 | L | 2.6<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.87 | 04/30-05/04/09 | LA0E51AH |
| Barium | 129 | | 2.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.50 | 04/30-05/04/09 | LA0E51AJ |
| Beryllium | 1.2 | | 0.37<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0E51AK |
| Calcium | 1170 | | 125<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 31.2 | 04/30-05/04/09 | LA0E51AL |
| Cadmium | ND | | 0.37<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0E51AM |
| Cobalt | 9.6 | | 0.75<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.25 | 04/30-05/04/09 | LA0E51AN |
| Chromium | 39.8 | | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.50 | 04/30-05/04/09 | LA0E51AP |
| Copper | 24.0 | | 3.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.62 | 04/30-05/04/09 | LA0E51AQ |
| Iron | 34100 | | 12.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.9 | 04/30-05/04/09 | LA0E51AR |
| Potassium | 1770 | | 125<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 31.2 | 04/30-05/04/09 | LA0E51AT |
| Magnesium | 4300 | | 62.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 9.4 | 04/30-05/04/09 | LA0E51AU |
| Manganese | 129 | | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.50 | 04/30-05/04/09 | LA0E51AV |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC08 SSP-FL-2C 1-2'

TOTAL Metals

Lot-Sample #...: G9D280272-008 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 110 B | J | 624 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0E51AW |
| | | | Dilution Factor: 1 | | MDL.....: 31.2 | | |
| Nickel | 19.5 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0E51AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Lead | 16.1 | L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0E51A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.75 | | |
| Antimony | ND | UL | 1.9 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0E51A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.62 | | |
| Selenium | ND | UL | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0E51A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.75 | | |
| Thallium | 0.93 B | L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0E51A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.62 | | |
| Vanadium | 67.4 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0E51AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Zinc | 84.7 | | 3.7 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0E51AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.75 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.054 | | 0.050 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0E51AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC09 SSP-FL-30 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-009
Date Sampled...: 04/14/09 Date Received..: 04/28/09
% Moisture.....: 14
Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | |
| Silver | ND | 0.58<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0FJ1AF |
| Aluminum | 9460 | 24.3<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.1 | 04/30-05/04/09 | LA0FJ1AG |
| Arsenic | 2.7 L | 2.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.81 | 04/30-05/06/09 | LA0FJ1AH |
| Barium | 99.7 | 2.3<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.46 | 04/30-05/04/09 | LA0FJ1AJ |
| Beryllium | 0.73 | 0.35<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0FJ1AK |
| Calcium | 358 | 116<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 29.0 | 04/30-05/04/09 | LA0FJ1AL |
| Cadmium | ND | 0.35<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0FJ1AM |
| Cobalt | 17.5 | 0.70<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.23 | 04/30-05/04/09 | LA0FJ1AN |
| Chromium | 23.0 | 1.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.46 | 04/30-05/04/09 | LA0FJ1AP |
| Copper | 8.0 | 2.9<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.58 | 04/30-05/04/09 | LA0FJ1AQ |
| Iron | 14900 | 11.6<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.6 | 04/30-05/04/09 | LA0FJ1AR |
| Potassium | 664 | 116<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 29.0 | 04/30-05/04/09 | LA0FJ1AT |
| Magnesium | 1470 | 57.9<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.7 | 04/30-05/04/09 | LA0FJ1AU |
| Manganese | 475 | 1.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.46 | 04/30-05/04/09 | LA0FJ1AV |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC09 SSP-FL-30 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-009 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 29.9 B | J | 579 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FJ1AW |
| | | | Dilution Factor: 1 | | MDL.....: 29.0 | | |
| Nickel | 10.9 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FJ1AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.35 | | |
| Lead | 13.4 | L | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FJ1A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Antimony | ND | VL | 1.7 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FJ1A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.58 | | |
| Selenium | ND | VL | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FJ1A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Thallium | ND | VL | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FJ1A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.58 | | |
| Vanadium | 26.0 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FJ1AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.35 | | |
| Zinc | 32.5 | | 3.5 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0FJ1AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.019 B | J | 0.046 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0FJ1AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.0099 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC10 SSP-FL-3F 1-2'

TOTAL Metals

Lot-Sample #...: G9D280272-010 Matrix.....: SO
Date Sampled...: 04/21/09 Date Received..: 04/28/09
% Moisture.....: 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | |
| Silver | ND | 0.61 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 23800 | 25.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AG |
| | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| Arsenic | 3.7 L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.85 | | |
| Barium | 72.6 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Beryllium | 1.0 | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 656 | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AL |
| | | Dilution Factor: 1 | | MDL.....: 30.3 | | |
| Cadmium | ND | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 15.5 | 0.73 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AN |
| | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| Chromium | 45.5 J | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AP |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Copper | 21.8 | 3.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Iron | 38100 | 12.1 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AR |
| | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| Potassium | 2240 | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AT |
| | | Dilution Factor: 1 | | MDL.....: 30.3 | | |
| Magnesium | 3650 | 60.6 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AU |
| | | Dilution Factor: 1 | | MDL.....: 9.1 | | |
| Manganese | 418 | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC10 SSP-FL-3F 1-2'

TOTAL Metals

Lot-Sample #...: G9D280272-010 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 42.9 B | J | 606 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AW |
| | | | Dilution Factor: 1 | | MDL.....: 30.3 | | |
| Nickel | 19.8 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 11.5 | L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND | VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND | VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Thallium | 1.3 B | L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Vanadium | 61.9 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FN1AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 63.4 | | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0FN1AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.035 B | J | 0.048 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0FN1AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39TMSC01 SSP-FL-3F 1-2'

TOTAL Metals

Lot-Sample #...: G9D280272-011 Matrix.....: SO
Date Sampled...: 04/21/09 Date Received..: 04/28/09
% Moisture.....: 17

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | | |
| Silver | ND | | 0.60 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AF |
| | | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 19300 | | 25.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AG |
| | | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| Arsenic | 3.8 | L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AH |
| | | | Dilution Factor: 1 | | MDL.....: 0.85 | | |
| Barium | 66.6 | | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AJ |
| | | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Beryllium | 0.91 | | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AK |
| | | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 556 | | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AL |
| | | | Dilution Factor: 1 | | MDL.....: 30.2 | | |
| Cadmium | ND | | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AM |
| | | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 15.1 | | 0.73 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AN |
| | | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| Chromium | 30.8 | J | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AP |
| | | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Copper | 19.6 | | 3.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AQ |
| | | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Iron | 31100 | | 12.1 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AR |
| | | | Dilution Factor: 1 | | MDL.....: 3.7 | | |
| Potassium | 2070 | | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AT |
| | | | Dilution Factor: 1 | | MDL.....: 30.2 | | |
| Magnesium | 3690 | | 60.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AU |
| | | | Dilution Factor: 1 | | MDL.....: 9.1 | | |
| Manganese | 374 | | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AV |
| | | | Dilution Factor: 1 | | MDL.....: 0.48 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39TMSC01 SSP-FL-3F 1-2'

TOTAL Metals

Lot-Sample #...: G9D280272-011 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 38.4 B | J | 605 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AW |
| | | | Dilution Factor: 1 | | MDL.....: 30.2 | | |
| Nickel | 16.7 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 10.9 | L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND | UL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Selenium | ND | UL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Thallium | 1.1 B | L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Vanadium | 52.7 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FR1AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 58.0 | | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0FR1AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.033 B | J | 0.048 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0FR1AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39SC11 SSP-FL-2H 0-1'**

**TOTAL Metals**

**Lot-Sample #...:** G9D280272-012 **Matrix.....:** SO
**Date Sampled...:** 04/21/09 **Date Received..:** 04/28/09
**% Moisture.....:** 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9120262 | | | | | | |
| Silver | ND | 0.60 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Aluminum** | 19700 | 25.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AG |
| | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| **Arsenic** | 3.3 L | 2.5 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0FX1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.85 | | |
| **Barium** | 76.6 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| **Beryllium** | 0.99 | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Calcium** | 748 | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AL |
| | | Dilution Factor: 1 | | MDL.....: 30.2 | | |
| Cadmium | ND | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Cobalt** | 13.7 | 0.72 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AN |
| | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| **Chromium** | 27.0 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AP |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| **Copper** | 17.2 | 3.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| **Iron** | 25900 | 12.1 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AR |
| | | Dilution Factor: 1 | | MDL.....: 3.7 | | |
| **Potassium** | 1620 | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AT |
| | | Dilution Factor: 1 | | MDL.....: 30.2 | | |
| **Magnesium** | 2920 | 60.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AU |
| | | Dilution Factor: 1 | | MDL.....: 9.1 | | |
| **Manganese** | 213 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC11 SSP-FL-2H 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-012 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 41.0 B | J | 604 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AW |
| | | | Dilution Factor: 1 | | MDL.....: 30.2 | | |
| Nickel | 14.1 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 14.5 | L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Antimony | ND | VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Selenium | ND | VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Thallium | ND | VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Vanadium | 49.3 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0FX1AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 58.1 | | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0FX1AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.024 B | J | 0.048 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0FX1AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC12 SSP-FL-4A 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-013 Matrix.....: SO
Date Sampled...: 04/21/09 Date Received..: 04/28/09
% Moisture.....: 18

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | | |
| Silver | ND | | 0.61 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AF |
| | | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 20500 | | 25.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AG |
| | | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| Arsenic | 3.6 | L | 2.6 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AH |
| | | | Dilution Factor: 1 | | MDL.....: 0.85 | | |
| Barium | 91.7 | | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AJ |
| | | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| Beryllium | 1.0 | | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AK |
| | | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 902 | | 122 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AL |
| | | | Dilution Factor: 1 | | MDL.....: 30.4 | | |
| Cadmium | ND | | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AM |
| | | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 15.1 | | 0.73 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AN |
| | | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| Chromium | 28.0 | | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AP |
| | | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| Copper | 25.9 | | 3.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AQ |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Iron | 29500 | | 12.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AR |
| | | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| Potassium | 1870 | | 122 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AT |
| | | | Dilution Factor: 1 | | MDL.....: 30.4 | | |
| Magnesium | 4060 | | 60.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AU |
| | | | Dilution Factor: 1 | | MDL.....: 9.1 | | |
| Manganese | 492 | | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AV |
| | | | Dilution Factor: 1 | | MDL.....: 0.49 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC12 SSP-FL-4A 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-013 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 44.9 B | J | 608 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AW |
| | | | Dilution Factor: 1 | | MDL.....: 30.4 | | |
| Nickel | 16.7 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 27.8 | L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND | UL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND | UL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Thallium | 0.79 B | L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Vanadium | 55.6 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F41AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 60.2 | | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0F41AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.049 | | 0.049 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0F41AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC13 SSP-FL-3L 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-014 Matrix.....: SO
Date Sampled...: 04/15/09 Date Received..: 04/28/09
% Moisture.....: 21

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120262 | | | | | | |
| Silver | ND | 0.64 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AF |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Aluminum | 28000 | 26.7 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AG |
| | | Dilution Factor: 1 | | MDL.....: 8.9 | | |
| Arsenic | 12.3 L | 2.7 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AH |
| | | Dilution Factor: 1 | | MDL.....: 0.89 | | |
| Barium | 194 | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.51 | | |
| Beryllium | 1.2 | 0.38 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AK |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Calcium | 906 | 127 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AL |
| | | Dilution Factor: 1 | | MDL.....: 31.8 | | |
| Cadmium | 0.40 | 0.38 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AM |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Cobalt | 30.8 | 0.76 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AN |
| | | Dilution Factor: 1 | | MDL.....: 0.25 | | |
| Chromium | 35.6 | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AP |
| | | Dilution Factor: 1 | | MDL.....: 0.51 | | |
| Copper | 39.2 | 3.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Iron | 50400 | 12.7 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AR |
| | | Dilution Factor: 1 | | MDL.....: 3.9 | | |
| Potassium | 2270 | 127 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AT |
| | | Dilution Factor: 1 | | MDL.....: 31.8 | | |
| Magnesium | 3250 | 63.7 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AU |
| | | Dilution Factor: 1 | | MDL.....: 9.6 | | |
| Manganese | 3850 | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AV |
| | | Dilution Factor: 1 | | MDL.....: 0.51 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC13 SSP-FL-3L 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-014 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 44.6 B | J | 637 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AW |
| | | | Dilution Factor: 1 | | MDL.....: 31.8 | | |
| Nickel | 21.1 | | 1.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.38 | | |
| Lead | 95.5 | L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.76 | | |
| Antimony | ND | VL | 1.9 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Selenium | ND | VL | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.76 | | |
| Thallium | 1.5 B | L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Vanadium | 77.2 | | 1.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0F81AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.38 | | |
| Zinc | 117 | | 3.8 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0F81AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.76 | | |
| Prep Batch #...: 9120377 | | | | | | | |
| Mercury | 0.049 B | J | 0.051 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0F81AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39SC14 NSP-SW-11 0-1'**

**TOTAL Metals**

**Lot-Sample #...: G9D280272-015** **Matrix.....: SO**
**Date Sampled...: 04/13/09** **Date Received..: 04/28/09**
**% Moisture.....: 13**

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...: 9120272** | | | | | | |
| Silver | ND | 0.57<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.11 | 04/30-05/04/09 | LA0GA1AK |
| **Aluminum** | **13900** | **24.0**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 8.0 | **04/30-05/04/09** | **LA0GA1AL** |
| **Arsenic** | **3.3** L | **2.4**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 0.80 | **04/30-05/04/09** | **LA0GA1AM** |
| **Barium** | **58.8** | **2.3**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 0.46 | **04/30-05/04/09** | **LA0GA1AN** |
| **Beryllium** | **0.87** | **0.34**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 0.11 | **04/30-05/04/09** | **LA0GA1AP** |
| **Calcium** | **608** | **114**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 28.6 | **04/30-05/04/09** | **LA0GA1AQ** |
| Cadmium | ND | 0.34<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.11 | 04/30-05/04/09 | LA0GA1AR |
| **Cobalt** | **10.0** | **0.69**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 0.23 | **04/30-05/04/09** | **LA0GA1AT** |
| **Chromium** | **20.7** | **1.4**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 0.46 | **04/30-05/04/09** | **LA0GA1AU** |
| **Copper** | **14.4** | **2.9**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 0.57 | **04/30-05/04/09** | **LA0GA1AV** |
| **Iron** | **22900** J | **11.4**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 3.5 | **04/30-05/04/09** | **LA0GA1AW** |
| **Potassium** | **1370** | **114**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 28.6 | **04/30-05/04/09** | **LA0GA1AX** |
| **Magnesium** | **2610** | **57.2**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 8.6 | **04/30-05/04/09** | **LA0GA1A0** |
| **Manganese** | **432** | **1.4**<br>Dilution Factor: 1 | **mg/kg** | **SW846 6010B**<br>MDL.....: 0.46 | **04/30-05/04/09** | **LA0GA1A1** |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC14 NSP-SW-11 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-015 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 44.7 B J | 572 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GA1A2 |
| | | Dilution Factor: 1 | | MDL.....: 28.6 | | |
| Nickel | 11.4 | 1.1 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GA1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.34 | | |
| Lead | 10.9 | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GA1AA |
| | | Dilution Factor: 1 | | MDL.....: 0.69 | | |
| Antimony | ND UL | 1.7 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GA1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.57 | | |
| Selenium | ND UL | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GA1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.69 | | |
| Thallium | 0.58 B J | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GA1AE |
| | | Dilution Factor: 1 | | MDL.....: 0.57 | | |
| Vanadium | 39.3 | 1.1 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GA1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.34 | | |
| Zinc | 44.8 | 3.4 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0GA1AG |
| | | Dilution Factor: 1 | | MDL.....: 0.69 | | |
| Prep Batch #...: 9120377 | | | | | | |
| Mercury | 0.028 B J | 0.046 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0GA1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.0098 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC15 NSP-SW-1S 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-016 Matrix.....: SO
Date Sampled...: 04/13/09 Date Received..: 04/28/09
% Moisture.....: 14

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120272 | | | | | | |
| Silver | ND | 0.58 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 21300 | 24.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AG |
| | | Dilution Factor: 1 | | MDL.....: 8.2 | | |
| Arsenic | 3.4 L | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.82 | | |
| Barium | 91.7 | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.47 | | |
| Beryllium | 0.91 | 0.35 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 1090 | 116 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AL |
| | | Dilution Factor: 1 | | MDL.....: 29.1 | | |
| Cadmium | ND | 0.35 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 14.9 | 0.70 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AN |
| | | Dilution Factor: 1 | | MDL.....: 0.23 | | |
| Chromium | 32.2 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AP |
| | | Dilution Factor: 1 | | MDL.....: 0.47 | | |
| Copper | 19.0 | 2.9 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.58 | | |
| Iron | 30200 J | 11.6 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AR |
| | | Dilution Factor: 1 | | MDL.....: 3.6 | | |
| Potassium | 1860 | 116 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AT |
| | | Dilution Factor: 1 | | MDL.....: 29.1 | | |
| Magnesium | 4380 | 58.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AU |
| | | Dilution Factor: 1 | | MDL.....: 8.7 | | |
| Manganese | 589 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.47 | | |

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# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39SC15 NSP-SW-1S 0-1'**

**TOTAL Metals**

**Lot-Sample #...:** G9D280272-016 **Matrix.....:** SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 50.4 B J | 582 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AW |
| | | Dilution Factor: 1 | | MDL.....: 29.1 | | |
| Nickel | 16.9 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.35 | | |
| Lead | 23.3 | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1A0 |
| | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Antimony | ND VL | 1.7 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.58 | | |
| Selenium | ND VL | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Thallium | 1.5 B J | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.58 | | |
| Vanadium | 56.9 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GF1AA |
| | | Dilution Factor: 1 | | MDL.....: 0.35 | | |
| Zinc | 64.4 | 3.5 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0GF1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Prep Batch #...: 9120378 | | | | | | |
| Mercury | 0.037 B J | 0.047 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0GF1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

. Shaw E & I Inc

Client Sample ID: 39SC16 NSP-SW-22 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-017 Matrix.....: SO
Date Sampled...: 04/13/09 Date Received..: 04/28/09
% Moisture.....: 16

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120272 | | | | | | |
| Silver | ND | 0.60 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 18500 | 25.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AG |
| | | Dilution Factor: 1 | | MDL.....: 8.3 | | |
| Arsenic | 3.6 L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.83 | | |
| Barium | 88.8 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Beryllium | 0.91 | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 712 | 119 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AL |
| | | Dilution Factor: 1 | | MDL.....: 29.8 | | |
| Cadmium | ND | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 11.0 | 0.72 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AN |
| | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| Chromium | 26.1 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AP |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Copper | 20.6 | 3.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Iron | 26800 J | 11.9 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AR |
| | | Dilution Factor: 1 | | MDL.....: 3.7 | | |
| Potassium | 2280 | 119 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AT |
| | | Dilution Factor: 1 | | MDL.....: 29.8 | | |
| Magnesium | 3880 | 59.6 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AU |
| | | Dilution Factor: 1 | | MDL.....: 8.9 | | |
| Manganese | 519 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |

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# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39SC16 NSP-SW-22 0-1'**

**TOTAL Metals**

**Lot-Sample #...:** G9D280272-017 **Matrix.....:** SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Sodium** | **44.2 B J** | **596** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GH1AW** |
| | | Dilution Factor: 1 | | MDL.....: 29.8 | | |
| **Nickel** | **15.6** | **1.2** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GH1AX** |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| **Lead** | **19.1** | **2.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GH1A0** |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Selenium | ND VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GH1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| **Thallium** | **1.2 B J** | **2.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GH1A3** |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| **Vanadium** | **50.7** | **1.2** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GH1AA** |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| **Zinc** | **55.0** | **3.6** | **mg/kg** | **SW846 6010B** | **04/30-05/06/09** | **LA0GH1AC** |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| **Prep Batch #...:** 9120378 | | | | | | |
| **Mercury** | **0.029 B J** | **0.048** | **mg/kg** | **SW846 7471A** | **04/30-05/01/09** | **LA0GH1AD** |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC17 NSP-FL-1G 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-018 Matrix.....: SO
Date Sampled...: 04/09/09 Date Received..: 04/28/09
% Moisture.....: 14

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120272 | | | | | | |
| Silver | ND | 0.58 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 17800 | 24.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AG |
| | | Dilution Factor: 1 | | MDL.....: 8.2 | | |
| Arsenic | 2.9 L | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.82 | | |
| Barium | 81.6 | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.47 | | |
| Beryllium | 0.90 | 0.35 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 494 | 117 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AL |
| | | Dilution Factor: 1 | | MDL.....: 29.2 | | |
| Cadmium | ND | 0.35 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 13.3 | 0.70 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AN |
| | | Dilution Factor: 1 | | MDL.....: 0.23 | | |
| Chromium | 24.6 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AP |
| | | Dilution Factor: 1 | | MDL.....: 0.47 | | |
| Copper | 149 | 2.9 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.58 | | |
| Iron | 26100 J | 11.7 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AR |
| | | Dilution Factor: 1 | | MDL.....: 3.6 | | |
| Potassium | 1860 | 117 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AT |
| | | Dilution Factor: 1 | | MDL.....: 29.2 | | |
| Magnesium | 3400 | 58.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AU |
| | | Dilution Factor: 1 | | MDL.....: 8.8 | | |
| Manganese | 368 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.47 | | |

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**Shaw E & I Inc**

**Client Sample ID: 39SC17 NSP-FL-1G 0-1'**

**TOTAL Metals**

**Lot-Sample #...: G9D280272-018** **Matrix.....: SO**

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Sodium** | **38.3 B J** | **584** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GK1AW** |
| | | Dilution Factor: 1 | | MDL.....: 29.2 | | |
| **Nickel** | **14.2** | **1.2** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GK1AX** |
| | | Dilution Factor: 1 | | MDL.....: 0.35 | | |
| **Lead** | **178** | **2.3** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GK1A0** |
| | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.58 | | |
| Selenium | ND VL | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| Thallium | ND | 2.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GK1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.58 | | |
| **Vanadium** | **48.7** | **1.2** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GK1AA** |
| | | Dilution Factor: 1 | | MDL.....: 0.35 | | |
| **Zinc** | **51.9** | **3.5** | **mg/kg** | **SW846 6010B** | **04/30-05/06/09** | **LA0GK1AC** |
| | | Dilution Factor: 1 | | MDL.....: 0.70 | | |
| **Prep Batch #...: 9120378** | | | | | | |
| **Mercury** | **0.030 B J** | **0.047** | **mg/kg** | **SW846 7471A** | **04/30-05/01/09** | **LA0GK1AD** |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight

*B Estimated result. Result is less than RL*

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39SC18 NSP-FL-2K 0-1'**

**TOTAL Metals**

**Lot-Sample #...:** G9D280272-019 **Matrix.....:** SO
**Date Sampled...:** 04/13/09 **Date Received..:** 04/28/09
**% Moisture.....:** 16

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9120272 | | | | | | |
| Silver | ND | 0.60 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GN1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Aluminum** | **16800** | **25.1** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AG** |
| | | Dilution Factor: 1 | | MDL.....: 8.4 | | |
| **Arsenic** | **3.2** L | **2.5** | **mg/kg** | **SW846 6010B** | **04/30-05/06/09** | **LA0GN1AH** |
| | | Dilution Factor: 1 | | MDL.....: 0.84 | | |
| **Barium** | **72.1** | **2.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AJ** |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| **Beryllium** | **0.94** | **0.36** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AK** |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Calcium** | **730** | **120** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AL** |
| | | Dilution Factor: 1 | | MDL.....: 29.9 | | |
| Cadmium | ND | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GN1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| **Cobalt** | **11.3** | **0.72** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AN** |
| | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| **Chromium** | **24.6** | **1.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AP** |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| **Copper** | **26.7** | **3.0** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AQ** |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| **Iron** | **25800** J | **12.0** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AR** |
| | | Dilution Factor: 1 | | MDL.....: 3.7 | | |
| **Potassium** | **2060** | **120** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AT** |
| | | Dilution Factor: 1 | | MDL.....: 29.9 | | |
| **Magnesium** | **3810** | **59.8** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AU** |
| | | Dilution Factor: 1 | | MDL.....: 9.0 | | |
| **Manganese** | **475** | **1.4** | **mg/kg** | **SW846 6010B** | **04/30-05/04/09** | **LA0GN1AV** |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC18 NSP-FL-2K 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-019 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 42.5 B J | 598 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GN1AW |
| | | Dilution Factor: 1 | | MDL.....: 29.9 | | |
| Nickel | 13.4 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GN1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 55.5 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GN1A0 |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GN1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Selenium | ND VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GN1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Thallium | 0.68 B J | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GN1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Vanadium | 46.6 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GN1AA |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 53.1 | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0GN1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Prep Batch #...: 9120378 | | | | | | |
| Mercury | 0.031 B J | 0.048 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0GN1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC19 NSP-FL-3E 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-020 Matrix.....: SO
Date Sampled...: 04/14/09 Date Received..: 04/28/09
% Moisture.....: 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120272 | | | | | | |
| Silver | ND | 0.60<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0GV1AF |
| Aluminum | 17900 | 25.2<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.4 | 04/30-05/04/09 | LA0GV1AG |
| Arsenic | 2.0 B J | 2.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.84 | 04/30-05/06/09 | LA0GV1AH |
| Barium | 93.9 | 2.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.48 | 04/30-05/04/09 | LA0GV1AJ |
| Beryllium | 0.91 | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0GV1AK |
| Calcium | 790 | 120<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.0 | 04/30-05/04/09 | LA0GV1AL |
| Cadmium | ND | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0GV1AM |
| Cobalt | 11.8 | 0.72<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.24 | 04/30-05/04/09 | LA0GV1AN |
| Chromium | 24.9 | 1.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.48 | 04/30-05/04/09 | LA0GV1AP |
| Copper | 18.5 | 3.0<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.60 | 04/30-05/04/09 | LA0GV1AQ |
| Iron | 27300 J | 12.0<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.7 | 04/30-05/04/09 | LA0GV1AR |
| Potassium | 2400 | 120<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.0 | 04/30-05/04/09 | LA0GV1AT |
| Magnesium | 4170 | 60.0<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 9.0 | 04/30-05/04/09 | LA0GV1AU |
| Manganese | 529 | 1.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.48 | 04/30-05/04/09 | LA0GV1AV |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC19 NSP-FL-3E 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-020 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 48.6 B J | 600 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GV1AW |
| | | Dilution Factor: 1 | | MDL.....: 30.0 | | |
| Nickel | 15.8 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GV1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 11.4 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GV1A0 |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GV1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Selenium | ND VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GV1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Thallium | 0.96 B J | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GV1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Vanadium | 50.0 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0GV1AA |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 55.9 | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0GV1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Prep Batch #...: 9120378 | | | | | | |
| Mercury | 0.027 B J | 0.048 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0GV1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL

# Form I Copy

· Shaw E & I Inc

Client Sample ID: 39TMSC02 NSP-FL-3E 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-021 Matrix.....: SO
Date Sampled...: 04/14/09 Date Received..: 04/28/09
% Moisture.....: 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120272 | | | | | | |
| Silver | ND | 0.60 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 18200 | 25.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AG |
| | | Dilution Factor: 1 | | MDL.....: 8.4 | | |
| Arsenic | 3.8 J | 2.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AH |
| | | Dilution Factor: 1 | | MDL.....: 0.84 | | |
| Barium | 95.4 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Beryllium | 0.89 | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 781 | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AL |
| | | Dilution Factor: 1 | | MDL.....: 30.2 | | |
| Cadmium | ND | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 11.9 | 0.72 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AN |
| | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| Chromium | 26.2 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AP |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Copper | 21.6 | 3.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Iron | 27600 J | 12.1 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AR |
| | | Dilution Factor: 1 | | MDL.....: 3.7 | | |
| Potassium | 2450 | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AT |
| | | Dilution Factor: 1 | | MDL.....: 30.2 | | |
| Magnesium | 4140 | 60.3 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AU |
| | | Dilution Factor: 1 | | MDL.....: 9.0 | | |
| Manganese | 527 | 1.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AV |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39TMSC02 NSP-FL-3E 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-021 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 46.7 B J | 603 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AW |
| | | Dilution Factor: 1 | | MDL.....: 30.2 | | |
| Nickel | 16.5 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AX |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 11.4 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01A0 |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Selenium | ND VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Thallium | 1.3 B J | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Vanadium | 50.9 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G01AA |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 57.7 | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0G01AC |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Prep Batch #...: 9120378 | | | | | | |
| Mercury | 0.032 B J | 0.048 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0G01AD |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39SC20 NSP-FL-2H 0-1'**

**. TOTAL Metals**

**Lot-Sample #...:** G9D280272-022 **Matrix.....:** SO
**Date Sampled...:** 04/13/09 **Date Received..:** 04/28/09
**% Moisture.....:** 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9120272 | | | | | | |
| Silver | ND | 0.61<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0G31AF |
| Aluminum | 17300 | 25.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 8.5 | 04/30-05/04/09 | LA0G31AG |
| Arsenic | 2.4 B L | 2.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.85 | 04/30-05/06/09 | LA0G31AH |
| Barium | 87.7 | 2.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 04/30-05/04/09 | LA0G31AJ |
| Beryllium | 0.89 | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0G31AK |
| Calcium | 694 | 121<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.3 | 04/30-05/04/09 | LA0G31AL |
| Cadmium | ND | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 04/30-05/04/09 | LA0G31AM |
| Cobalt | 11.8 | 0.73<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.24 | 04/30-05/04/09 | LA0G31AN |
| Chromium | 24.3 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 04/30-05/04/09 | LA0G31AP |
| Copper | 54.7 | 3.0<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.61 | 04/30-05/04/09 | LA0G31AQ |
| Iron | 26700 J | 12.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.8 | 04/30-05/04/09 | LA0G31AR |
| Potassium | 2030 | 121<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.3 | 04/30-05/04/09 | LA0G31AT |
| Magnesium | 3600 | 60.7<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 9.1 | 04/30-05/04/09 | LA0G31AU |
| Manganese | 444 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 04/30-05/04/09 | LA0G31AV |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC20 NSP-FL-2H 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-022 Matrix.....: SO

| PARAMETER | RESULT | | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|---|
| Sodium | 42.6 B | J | 607 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G31AW |
| | | | Dilution Factor: 1 | | MDL.....: 30.3 | | |
| Nickel | 14.2 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G31AX |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 119 | | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G31A0 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND | UL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G31A1 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND | UL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G31A2 |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Thallium | ND | | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G31A3 |
| | | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Vanadium | 48.1 | | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G31AA |
| | | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 51.5 | | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0G31AC |
| | | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9120378 | | | | | | | |
| Mercury | 0.031 B | J | 0.049 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0G31AD |
| | | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC21 NSP-SW-28 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-023 Matrix.....: SO
Date Sampled...: 04/23/09 Date Received..: 04/28/09
% Moisture.....: 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120272 | | | | | | |
| Silver | ND | 0.61 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 20600 | 25.6 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AG |
| | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| Arsenic | 5.0 L | 2.6 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AH |
| | | Dilution Factor: 1 | | MDL.....: 0.85 | | |
| Barium | 83.2 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| Beryllium | 1.0 | 0.37 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 793 | 122 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AL |
| | | Dilution Factor: 1 | | MDL.....: 30.5 | | |
| Cadmium | ND | 0.37 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 13.5 | 0.73 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AN |
| | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| Chromium | 32.0 | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AP |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| Copper | 56.6 | 3.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Iron | 31100 J | 12.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AR |
| | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| Potassium | 2110 | 122 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AT |
| | | Dilution Factor: 1 | | MDL.....: 30.5 | | |
| Magnesium | 4130 | 60.9 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AU |
| | | Dilution Factor: 1 | | MDL.....: 9.1 | | |
| Manganese | 537 | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AV |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC21 NSP-SW-28 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-023 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 46.1 B J | 609 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AW |
| | | Dilution Factor: 1 | | MDL.....: 30.5 | | |
| Nickel | 17.5 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AX |
| | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Lead | 203 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71A0 |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Thallium | 0.77 B J | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Vanadium | 58.4 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G71AA |
| | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Zinc | 59.3 | 3.7 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0G71AC |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9120378 | | | | | | |
| Mercury | 0.050 | 0.049 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0G71AD |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC22 NSP-FL-5D 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-024 Matrix.....: SO
Date Sampled...: 04/23/09 Date Received..: 04/28/09
% Moisture.....: 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9120272 | | | | | | |
| Silver | ND | 0.61 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AF |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 19700 | 25.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AG |
| | | Dilution Factor: 1 | | MDL.....: 8.5 | | |
| Arsenic | 3.3 L | 2.6 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AH |
| | | Dilution Factor: 1 | | MDL.....: 0.85 | | |
| Barium | 78.5 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| Beryllium | 0.94 | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AK |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 608 | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AL |
| | | Dilution Factor: 1 | | MDL.....: 30.4 | | |
| Cadmium | ND | 0.36 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 11.7 | 0.73 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AN |
| | | Dilution Factor: 1 | | MDL.....: 0.24 | | |
| Chromium | 27.4 | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AP |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |
| Copper | 69.6 | 3.0 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Iron | 28200 J | 12.1 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AR |
| | | Dilution Factor: 1 | | MDL.....: 3.8 | | |
| Potassium | 2170 | 121 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AT |
| | | Dilution Factor: 1 | | MDL.....: 30.4 | | |
| Magnesium | 3860 | 60.7 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AU |
| | | Dilution Factor: 1 | | MDL.....: 9.1 | | |
| Manganese | 350 | 1.5 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AV |
| | | Dilution Factor: 1 | | MDL.....: 0.49 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC22 NSP-FL-5D 0-1'

TOTAL Metals

Lot-Sample #...: G9D280272-024 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 47.4 B J | 607 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AW |
| | | Dilution Factor: 1 | | MDL.....: 30.4 | | |
| Nickel | 16.5 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AX |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 115 | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81A0 |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Selenium | ND VL | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Thallium | 0.77 B J | 2.4 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.61 | | |
| Vanadium | 51.8 | 1.2 | mg/kg | SW846 6010B | 04/30-05/04/09 | LA0G81AA |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 55.8 | 3.6 | mg/kg | SW846 6010B | 04/30-05/06/09 | LA0G81AC |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9120378 | | | | | | |
| Mercury | 0.041 B J | 0.049 | mg/kg | SW846 7471A | 04/30-05/01/09 | LA0G81AD |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Dioxin Furans
Test America Laboratories, Inc., SDG G9E130208

**DATE:** June 25, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU39 Removal Action on May 12, 2009. The samples were analyzed for Dioxin Furan compounds using USEPA SW-846 Method 8290 High Resolution Gas Chromatography/High Resolution Mass Spectroscopy (HRGC/HRMS). A total of twenty two soil samples (five diluted and two re-analysis samples included) were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 39SC01 | G9E130208-001 | 39TMSC01 | G9E130208-011 |
| 39SC03 | G9E130208-003 | 39TMSC01 | G9E130208-011DL |
| 39SC05 | G9E130208-005 | 39SC12 | G9E130208-013 |
| 39SC05 | G9E130208-005DL | 39SC14 | G9E130208-015 |
| 39SC07 | G9E130208-007 | 39SC16 | G9E130208-017 |
| 39SC08 | G9E130208-008 | 39SC18 | G9E130208-019 |
| 39SC08 | G9E130208-008DL | 39SC19 | G9E130208-020 |
| 39SC10 | G9E130208-010 | 39TMSC02 | G9E130208-021 |
| 39SC10 | G9E130208-010RE | 39SC21 | G9E130208-023 |
| 39SC10 | G9E130208-010DL | 39SC22 | G9E130208-024 |
| 39SC10 | G9E130208-010DLRE | 39SC22 | G9E130208-024DL |

Data were reviewed and validated using a combination of project QAPP, *DOD Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *USEPA Region III Dioxin/Furan Data Validation Guidance* (March, 1999). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| X | | Blank Analysis |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| X | | Internal Standards (IS) Recovery Standard Solutions |
| | X | Cleanup Standards |
| | X | Laboratory Control Standard or Ongoing Precision Result (OPR) |
| | X | Matrix Spike and Spike Duplicate |
| X | | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications, except for the following. For sample 39SC10 (G9E130208-010), surrogates 13C-1,2,3,7,8-PeCDD (38%) and 13C-1,2,3,4,7,8-HxCDF (39%) were below criteria. The sample was re-extracted and re-analyzed with all surrogates within criteria. Samples 39SC10 (G9E130208-010RE) and 39SC10 (G9E130208-010DLRE) should be used based upon this outcome; therefore, samples 39SC10 (G9E130208-010) and 39SC10 (G9E130208-010DL) from the original extraction were rejected "R" for data usability. There were no impacts to sample completeness. For samples 39SC05 (G9E130208-005), 39SC08 (G9E130208-008), 39SC10 (G9E130208-010), 39SC10 (G9E130208-010RE), 39TMSC01 (G9E130208-011), and 39SC22 (G9E130208-024), target compound OCDD exceeded the calibration range (E-lab flag), the data point was qualified rejected "R" for data usability. The second diluted run data reported should be used only for the compounds meeting this condition. There were no impacts to the data completeness.

Eric Malarek, Chemist

6/25/09
Date

**RFAAP VALIDATION REPORT**
**DIOXIN FURAN REVIEW**
**SDG G9E130208**

**I-Holding Times and Preservation**

The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, dioxin and furans are shipped cooled (@4°C ± 2°C) with a maximum holding time of 30 days from sample collection to preparative extraction and 45 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 05/12/09, the coolers were received on by the primary laboratory (Test America) on 05/13/09 at 10°C, 10°C, and 10°C. The receipt temperatures were above criteria; however, did not impact the data quality. No qualifiers were applied based upon this outlier.

- Holding Time Review: For the soil samples collected 05/12/09, the dioxins and furans were extracted on 05/14/09 (05/19/09 for re-analysis "-RE" samples) and analyzed on 05/15/09, 05/16/09, 05/18/09, and 05/19/09 (05/20/09 and 05/21/09 for re-analysis "-RE" samples). Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**

The purpose of laboratory (or field) blank analyses is to determine the existence and magnitude of contamination problems resulting from field and laboratory activities. No contamination should be found in any of the blanks >EDL (estimated detection limit). The DoD QSM criteria specifies all concentrations should be less than ½ MRL (<MRL for common laboratory contaminants OCDD and OCDF) and <2*EDL for the calibration blanks. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants OCDD or OCDF, or 5 times (5X) the maximum amount for other target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 100) if needed. The soil samples were sampled with directly into the sample jars from the excavator bucket; therefore, no rinse blank applies to these samples.

## Table 2 Blank Contamination Analysis Summary

| Analysis Date | QC Blank ID | Compound | Max Conc. pg/g | Action Level pg/g | B qualified samples |
|---|---|---|---|---|---|
| 05/15/09 | G9E140000-464B | 1,2,3,6,7,8-HxCDD | 0.018JQ | 0.090 | 39SC14, 39SC16, 39TMSC02 |
| 05/15/09 | G9E140000-464B | Total HxCDD | 0.079 | 0.40 | None |
| 05/15/09 | G9E140000-464B | 1,2,3,4,6,7,8-HpCDD | 0.043J | 0.22 | None |
| 05/15/09 | G9E140000-464B | Total HpCDD | 0.14 | 0.70 | None |
| 05/15/09 | G9E140000-464B | OCDD | 0.21JQ | 2.10 | None |
| 05/15/09 | G9E140000-464B | 2,3,7,8-TCDF | 0.15J | 0.75 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08, 39SC10, 39TMSC01, 39SC12, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02 |
| 05/15/09 | G9E140000-464B | Total TCDF | 0.34 | 1.70 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08, 39TMSC01, 39SC12, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02 |
| 05/15/09 | G9E140000-464B | 1,2,3,7,8-PeCDF | 0.11JQ | 0.55 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08, 39SC10, 39TMSC01, 39SC12, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02 |
| 05/15/09 | G9E140000-464B | 2,3,4,7,8-PeCDF | 0.055JQ | 0.28 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08, 39SC10, 39TMSC01, 39SC12, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02 |
| 05/15/09 | G9E140000-464B | Total PeCDF | 0.34 | 1.70 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08, 39TMSC01, 39SC12, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02 |
| 05/15/09 | G9E140000-464B | 1,2,3,4,7,8-HxCDF | 0.14J | 0.70 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08DL, 39TMSC01, 39SC12, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02 |
| 05/15/09 | G9E140000-464B | 1,2,3,6,7,8-HxCDF | 0.035JQ | 0.18 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08, 39TMSC01, 39SC12, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02, 39SC22 |
| 05/15/09 | G9E140000-464B | 1,2,3,7,8,9-HxCDF | 0.030JQ | 0.15 | 39SC05, 39SC07, 39SC08, 39TMSC01, 39SC14, 39SC16, 39SC18, 39TMSC02, 39SC21 |
| 05/15/09 | G9E140000-464B | Total HxCDF | 0.47 | 2.35 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08DL, 39SC08DL, 39TMSC01, 39SC12, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02, 39SC21, 39SC22, 39SC22DL |
| 05/15/09 | G9E140000-464B | 1,2,3,4,6,7,8-HpCDF | 0.056JQ | 0.28 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08, 39SC14, 39SC16, 39SC19, 39TMSC02, 39SC22 |
| 05/15/09 | G9E140000-464B | 1,2,3,4,7,8,9-HpCDF | 0.050J | 0.25 | 39SC01, 39SC05, 39SC07, 39SC08, 39TMSC01, 39SC12, 39SC14, 39SC16, 39SC18, 39SC19, 39SC21 |
| 05/15/09 | G9E140000-464B | Total HpCDF | 0.18 | 0.90 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC08, 39SC08DL, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02, 39SC22, 39SC22DL |
| 05/15/09 | G9E140000-464B | OCDF | 0.082J | 0.82 | 39SC01, 39SC03, 39SC05, 39SC07, 39SC14, 39SC16, 39SC18, 39SC19, 39TMSC02, 39SC21 |

**Table 2 Blank Contamination Analysis Summary, Continued**

| Analysis Date | QC Blank ID | Compound | Max Conc. pg/g | Action Level pg/g | B qualified samples |
|---|---|---|---|---|---|
| 05/20/09 | G9E190000-468B | 1,2,3,4,6,7,8-HpCDD | 0.11J | 0.55 | None |
| 05/20/09 | G9E190000-468B | Total HpCDD | 0.22 | 1.10 | None |
| 05/20/09 | G9E190000-468B | OCDD | 0.23JQ | 2.30 | None |
| 05/20/09 | G9E190000-468B | 1,2,3,7,8-PeCDF | 0.085JQ | 0.43 | 39SC10RE |
| 05/20/09 | G9E190000-468B | Total PeCDF | 0.085 | 0.43 | None |
| 05/20/09 | G9E190000-468B | 1,2,3,4,7,8-HxCDF | 0.39J | 1.95 | 39SC10RE, 39SC10DLRE |
| 05/20/09 | G9E190000-468B | 1,2,3,6,7,8-HxCDF | 0.055JQ | 0.28 | None |
| 05/20/09 | G9E190000-468B | 2,3,4,6,7,8-HxCDF | 0.060J | 0.30 | 39SC10RE |
| 05/20/09 | G9E190000-468B | 1,2,3,7,8,9-HxCDF | 0.12JQ | 0.60 | 39SC10RE |
| 05/20/09 | G9E190000-468B | Total HxCDF | 0.92 | 4.60 | 39SC10RE, 39SC10DLRE |
| 05/20/09 | G9E190000-468B | 1,2,3,4,6,7,8-HpCDF | 0.10JQ | 0.50 | None |
| 05/20/09 | G9E190000-468B | 1,2,3,4,7,8,9-HpCDF | 0.40J | 2.00 | 39SC10RE |
| 05/20/09 | G9E190000-468B | Total HpCDF | 0.67 | 3.35 | 39SC10DLRE |

J = Estimated value >EDL and <MRL.
Q = Estimated maximum possible concentration (EMPC).

**III-Instrument Performance Check**

Instrument must be tuned with perfluorokerosene (PFK) to achieve a static resolving power of at least 10,000 (10% valley) and lock-mass ion between lowest and highest masses for each descriptor and level of reference compound ≤10%. Documentation of the mass spectrometer resolving power is accomplished by recording the peak profile of the high-mass reference signal (typically m/z 330.9792) obtained during a peak examination by using the low-mass PFK ion at m/z 292.9825 or lower in mass as reference. At the beginning of the each 12-hour period, the chromatographic resolution is verified in the same fashion as in the initial calibration through the analysis of HRCC solution on the DB-5 (or equivalent) column or through the analysis of the column performance solution on the SP-2331 or SP-225 (or equivalent) column. A 25% valley must be achieved between the close eluters.

- All PFK forms were verified and found to be in compliance with method specification. No qualifiers were applied.

**IV-Initial Calibration**

Once the window defining mix has been analyzed and the descriptor switching times have been verified, the five point calibration solutions can be analyzed prior to sample analysis. Per method and DoD QSM, the initial calibration criteria are as follows:

  - The percent relative standard deviations for the mean response factors RRF(n) from the 17 unlabeled standards must not exceed ±20%, and those for the labeled reference compounds must not exceed ±30%;
  - The signal to noise ratio ≥10% for all target ions;
  - Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For initial calibration performed on 04/20/09 for all target compounds on instrument 4D5, all criteria were met. No qualifiers were applied. Samples 39SC01 (G9E130208-001), 39SC03 (G9E130208-003), 39SC05 (G9E130208-005), 39SC05 (G9E130208-005DL), 39SC07 (G9E130208-007), 39SC08 (G9E130208-008), 39SC08 (G9E130208-008DL), 39SC10 (G9E130208-010), 39SC10 (G9E130208-010DL), 39SC10 (G9E130208-010RE), 39SC10 (G9E130208-010DLRE), 39TMSC01 (G9E130208-011), 39TMSC01 (G9E130208-011DL), 39SC12 (G9E130208-013), 39SC14 (G9E130208-015), 39SC16 (G9E130208-017), 39SC18 (G9E130208-019), 39SC19 (G9E130208-020), 39TMSC02 (G9E130208-021), 39SC21 (G9E130208-023), 39SC22 (G9E130208-024), and 39SC22 (G9E130208-024DL) apply to this initial calibration.

**V-Continuing Calibration**
The continuing calibration consists of two parts: evaluation of the mass resolution and retention time check. Per method and DoD QSM, the following stipulates the continuing calibration criteria.

- The signal signal-to-noise ratio (S/N) must be at least 10:1 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard for each analyte.
- The relative response factor of each analyte for the unlabeled standard must be within ±20% of the average RF obtained from the initial calibration, and the RRF of each labeled standard must be within ±30% of the average RRF established during initial calibration. This is expressed in term of percent difference %D.
- Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For continuing calibration performed on 05/15/09 @16:05 on instrument 4D5, all criteria were met. No qualifiers were applied. Samples 39SC01 (G9E130208-001), 39SC03 (G9E130208-003), and 39SC05 (G9E130208-005) apply to this continuing calibration.

- For continuing calibration performed on 05/15/09 @22:15 on instrument 4D5, all criteria were met. No qualifiers were applied. No samples reported apply to this continuing calibration.

- For continuing calibration performed on 05/16/09 @11:06 on instrument 4D5, all criteria were met. No qualifiers were applied. Samples 39SC07 (G9E130208-007), 39SC08 (G9E130208-008), 39SC10 (G9E130208-010), 39TMSC01 (G9E130208-011), 39SC12 (G9E130208-013), 39SC14 (G9E130208-015), 39SC16 (G9E130208-017), 39SC18 (G9E130208-019), 39SC19 (G9E130208-020), and 39TMSC02 (G9E130208-021) apply to this continuing calibration.

- For continuing calibration performed on 05/18/09 @19:24 on instrument 4D5, all criteria were met. No qualifiers were applied. Samples 39SC05 (G9E130208-005DL), 39SC08 (G9E130208-008DL), 39SC10 (G9E130208-010DL), 39TMSC01 (G9E130208-011DL), 39SC21 (G9E130208-023), and 39SC22 (G9E130208-024) apply to this continuing calibration.

- For continuing calibration performed on 05/19/09 @04:12 on instrument 4D5, congener 1,2,3,4,7,8-HxCDD (-23.2%) was outside criteria. For all other congeners and labeled standards, all criteria were met. No samples reported apply to this continuing calibration; therefore, no qualifiers were applied based upon this outlier.

- For continuing calibration performed on 05/19/09 @10:47 on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 39SC22 (G9E130208-024DL) applies to this continuing calibration.

- For continuing calibration performed on 05/19/09 @13:43 on instrument 4D5, all criteria were met. No qualifiers were applied. No samples reported apply to this continuing calibration.

- For continuing calibration performed on 05/20/09 @11:48 on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 39SC10 (G9E130208-010DLRE) applies to this continuing calibration.

- For continuing calibration performed on 05/20/09 @16:38 on instrument 4D5, all criteria were met. No qualifiers were applied. No samples reported apply to this continuing calibration.

- For continuing calibration performed on 05/21/09 @10:07 on instrument 4D5, all criteria were met. No qualifiers were applied. Sample 39SC10 (G9E130208-010RE) applies to this continuing calibration.

- For continuing calibration performed on 05/21/09 @13:15 on instrument 4D5, all criteria were met. No qualifiers were applied. No samples reported apply to this continuing calibration.

**VI-Internal Standards (IS) Recovery Standard Solutions**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Specific criteria include: Recoveries of the isotopically-labeled recovery standards to fall within the 40 to 135 percent range for the tetra- through octachlorinated congeners, or as stated in the data package (DoD QSM limits 40-135%).

- For sample 39SC10 (G9E130208-010), surrogates 13C-1,2,3,7,8-PeCDD (38%) and 13C-1,2,3,4,7,8-HxCDF (39%) were below criteria. The sample was re-extracted and re-analyzed with all surrogates within criteria. Samples 39SC10 (G9E130208-010RE) and 39SC10 (G9E130208-010DLRE) should be used based upon this outcome; therefore, samples 39SC10 (G9E130208-010) and 39SC10 (G9E130208-010DL) from the original extraction were rejected "R" for data usability. There were no impacts to sample completeness.

- For all other samples, all criteria were met. No qualifiers were applied.

**VII-Cleanup Standards**
Cleanup standards are added to every sample, blank, quality control sample, and calibration solution. This compound is added to the samples after extraction but prior to cleanup and is used to verify the percent recovery obtained using the isotope dilution technique. The control limits are 40 to 135 percent (DoD QSM limits 40-135%).

- All criteria were met. No qualifiers were applied.

**VIII-Laboratory Control Standard (LCS) or Ongoing Precision Result (OPR)**
LCSs are used to monitor laboratory accuracy and precision by calculating the percent recoveries of the spiked compounds. Per DOD QSM and method criteria, acceptable performance is determined by:

1. Recoveries of the isotopically-labeled extraction standards to fall within 40-135% control limits for the tetra- through octachlorinated congeners, or as stated in the data package;

2. Recoveries (accuracy) of the unlabeled compounds should be within $\pm$35% when spiked at the method quantitation limit and within $\pm$30% when spiked above 20 times the method quantitation limit, or as stated in the data package;

3. When duplicate OPR are required, the relative percent difference (RPD) of the unlabeled analytes concentrations should be within 30% when spiked at the method quantitation limit and within $\pm$20% when spiked above 20 times the method quantitation limit.

- Sample G9E140000-464 was used as LCS and LCSD on 05/15/09 analytical run. All criteria were met. No qualifiers were applied. Samples 39SC01 (G9E130208-001), 39SC03 (G9E130208-003), 39SC05 (G9E130208-005), 39SC05 (G9E130208-005DL), 39SC07 (G9E130208-007), 39SC08 (G9E130208-008), 39SC08 (G9E130208-008DL), 39SC10 (G9E130208-010), 39SC10 (G9E130208-010DL), 39TMSC01 (G9E130208-011), 39TMSC01 (G9E130208-011DL), 39SC12 (G9E130208-013), 39SC14 (G9E130208-015), 39SC16 (G9E130208-017), 39SC18 (G9E130208-019), 39SC19 (G9E130208-020), 39TMSC02 (G9E130208-021), 39SC21 (G9E130208-023), 39SC22 (G9E130208-024), and 39SC22 (G9E130208-024DL) apply to this LCS.

- Sample G9E190000-468 was used as LCS and LCSD on 05/20/09 analytical run. All criteria were met. No qualifiers were applied. Samples 39SC10 (G9E130208-010RE) and 39SC10 (G9E130208-010DLRE) apply to this LCS.

**IX-Matrix Spike/Matrix Spike Duplicate**

Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. Per DoD QSM, MS/MSD recoveries must be within in-house laboratory limits (75-125%) and RPD ≤20%.

- No project specific soil matrix MS/MSD was performed in this SDG; therefore, it was not evaluated.

**X-Field Duplicate Sample Analysis**

Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid matrix samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- Field soil sample duplicate pair 39SC10 (G9E130208-010RE) and 39TMSC01 (G9E130208-011) was collected for dioxin and furans. Based on the surrogate failures (See Section VI), the re-analysis samples were used for the original sample of the duplicate pair. For where required, the diluted samples were used. All detected dioxin and furans found in the sample and its duplicate pair and associated %RPD are noted in **Table 3**. All other dioxin and furans congeners were non-detect. Congeners 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, OCDF, Total HxCDF, Total HpCDF, Total HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,6,7,8-HxCDF, 1,2,3,4,7,8-HxCDD and 1,2,3,6,7,8-HxCDD were above criteria and was qualified estimated "J" based upon the high RPD. The probable cause for qualification is from matrix interferences and/or the low levels detected (i.e. <MRL). For all other target dioxin and furans, all criteria were met.

**Table 3 Field Precision Hits Analysis Summary for Dioxin and Furans for Duplicate Pair 39SC10 (G9E130208-010RE) and 39TMSC01 (G9E130208-011)**

| Compound | Original Sample (pg/g) | Duplicate Pair (pg/g) | %RPD |
|---|---|---|---|
| 2,3,7,8-TCDF | 0.40J | 0.33JB | 19.2 |
| 1,2,3,7,8-PeCDF | 0.52JQB | 0.27JB | 63.3 |
| 2,3,4,7,8-PeCDF | 0.28JQ | 0.15JQB | 60.5 |
| 1,2,3,4,7,8-HxCDF | 1.4JB | 0.44JB | 104 |
| 2,3,4,6,7,8-HxCDF | 0.53JB | 0.17J | 103 |
| 1,2,3,7,8,9-HxCDF | 0.25JQB | 0.25JQB | 0.0 |
| 1,2,3,4,6,7,8-HpCDF | 2.7JB | 0.65JB | 122 |
| OCDF | 3.2JQ | 1.3JB | 84.4 |
| Total TCDF | 0.79 | 1.1 | 32.8 |
| Total PeCDF | 1.9 | 1.4 | 30.3 |
| Total HxCDF | 5.0 | 1.7 | 98.5 |
| Total HpCDF | 5.7 | 1.1 | 135 |
| Total TCDD | 1.2U | 0.21 | NA |
| 2,3,7,8-TCDD | 1.2U | 0.068JQ | NA |
| Total PeCDD | 0.86 | 0.86 | 0.0 |
| 1,2,3,7,8-PeCDD | 5.9U | 0.11JQ | NA |
| Total HxCDD | 18.0 | 9.0 | 66.7 |
| 1,2,3,7,8,9-HxCDD | 2.1J | 0.93J | 77.2 |
| Total HpCDD | 180 | 140 | 25.0 |
| 1,2,3,4,6,7,8-HpCDD | 97.0B | 68.0B | 35.2 |

**Table 3 Field Precision Hits Analysis Summary for Dioxin and Furans for Duplicate Pair 39SC10 (G9E130208-010RE) and 39TMSC01 (G9E130208-011), Continued**

| Compound | Original Sample (pg/g) | Duplicate Pair (pg/g) | %RPD |
|---|---|---|---|
| OCDD | 9600B | 6500B | 38.5 |
| 1,2,3,6,7,8-HxCDF | 0.42JQB | 0.12JQB | 111 |
| 1,2,3,4,7,8,9-HpCDF | 1.2JB | 0.12JB | 0.0 |
| 1,2,3,4,7,8-HxCDD | 1.6J | 0.50JQ | 105 |
| 1,2,3,6,7,8-HxCDD | 1.4J | 0.57JQB | 84.3 |

B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = Estimated value >EDL and <MRL.
Q = Estimated maximum possible concentration (EMPC).
U = Non-detect as <MRL.
NA = Not Applicable.

- Field soil sample duplicate pair 39SC19 (G9E130208-020) and 39TMSC02 (G9E130208-021) was collected for dioxin and furans. All detected dioxin and furans found in the sample and its duplicate pair and associated %RPD are noted in **Table 4**. All other dioxin and furans congeners were non-detect. Congeners 2,3,4,7,8-PeCDF and Total HpCDF were above criteria and was qualified estimated "J" based upon the high RPD. The probable cause for qualification is from matrix interferences and/or the low levels detected (i.e. <MRL). For all other target dioxin and furans, all criteria were met.

**Table 4 Field Precision Hits Analysis Summary for Dioxin and Furans for Duplicate Pair 39SC19 (G9E130208-020) and 39TMSC02 (G9E130208-021)**

| Compound | Original Sample (pg/g) | Duplicate Pair (pg/g) | %RPD |
|---|---|---|---|
| 2,3,7,8-TCDF | 0.21JB | 0.22JQB | 4.7 |
| 1,2,3,7,8-PeCDF | 0.21JQB | 0.17JQB | 21.1 |
| 2,3,4,7,8-PeCDF | 0.038JB | 0.067JQB | 55.2 |
| 1,2,3,4,7,8-HxCDF | 0.20JB | 0.26JB | 26.1 |
| 2,3,4,6,7,8-HxCDF | 0.057JQ | 0.049JQ | 15.1 |
| 1,2,3,7,8,9-HxCDF | 6.0U | 0.075JQB | NA |
| 1,2,3,4,6,7,8-HpCDF | 0.11JB | 0.082JQB | 29.2 |
| OCDF | 0.25JQB | 0.31JB | 21.4 |
| Total TCDF | 0.37 | 0.43 | 15.0 |
| Total PeCDF | 0.70 | 0.66 | 5.9 |
| Total HxCDF | 0.78 | 0.81 | 3.8 |
| Total HpCDF | 0.33 | 0.19 | 53.9 |
| Total TCDD | 1.2U | 0.061 | NA |
| 2,3,7,8-TCDD | 1.2U | 0.032JQ | NA |
| Total PeCDD | 0.12 | 5.9U | NA |
| Total HxCDD | 1.0 | 1.3 | 26.1 |
| 1,2,3,7,8,9-HxCDD | 0.46J | 0.37JQ | 21.7 |
| Total HpCDD | 17.0 | 18.0 | 5.7 |
| 1,2,3,4,6,7,8-HpCDD | 9.9B | 11.0B | 10.5 |
| OCDD | 700B | 810B | 14.6 |
| 1,2,3,6,7,8-HxCDF | 0.042JQB | 0.053JQB | 23.2 |
| 1,2,3,4,7,8,9-HpCDF | 0.075JQB | 5.9U | NA |
| 1,2,3,4,7,8-HxCDD | 6.0U | 0.058JQ | NA |
| 1,2,3,6,7,8-HxCDD | 6.0UB | 0.088JQB | NA |

B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = Estimated value >EDL and <MRL.
Q = Estimated maximum possible concentration (EMPC).
U = Non-detect as <MRL.
NA = Not Applicable.

**XI-Quantitation Verification**

The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification. Any value reported by the laboratory as estimated based on an analyte to internal standard ratio below the calibration curve was qualified as estimated "J". The signal signal-to-noise ratio (S/N) must be greater than 2.5 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard. Any detected value with ether interference was qualified as estimated "J". For where the ion ratio failed the 25% criteria (Q-lab flag), the estimated maximum possible concentration (EMPC) was reported and flagged estimated "J". For where presence of quantitation interference, the date was flagged estimated "J" for detects and "UJ" for non-detects.

- For samples 39SC05 (G9E130208-005), 39SC08 (G9E130208-008), 39SC10 (G9E130208-010), 39SC10 (G9E130208-010RE), 39TMSC01 (G9E130208-011), and 39SC22 (G9E130208-024), target compound OCDD exceeded the calibration range (E-lab flag), the data point was qualified rejected "R" for data usability. The second diluted run data reported should be used only for the compounds meeting this condition. There were no impacts to the data completeness.

**Sample: 39SC01 (G9E130208-001), OCDD**

A(x) = sum of the integrated ion abundances of the quantitation ions for the unlabeled ions;

A(is) = sum of the integrated ion abundances of the quantitation ions for the labeled ions;

Q(is) = quantity, in pg, of the internal standard added to the sample before extraction; Here need to multiply concentration (pg/uL) by final extract volume (uL).

W = weight, in g, of the sample (solid or organic liquid) as dry weight, or volume in mL of an aqueous sample; and

Avg. RRF(n) = calculated mean relative response factor for the unlabeled analyte.

$$\text{Conc. (ng/kg)} = \frac{(A(x))*Q(is)}{A(is) * W * \text{Avg. RRF}} = \frac{(2738430000)*4.0*1000}{(335020000) * (10.22 * 0.8310) * 1.084} =$$

= 3551 ng/kg = 3500 pg/g

Reported Value = 3500 pg/g
% Difference = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% RPD for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitaion limit may be inaccurate or imprecise. |
| N | Tenative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identificaition questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitaion limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from USEPA Region III Dioxin/Furan Data Validation Guidance (March, 1999) and Region III Modifications to the National Functional Guidelines for Organic Data Review (September 1994).

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**Shaw E & I Inc**

**Sample ID: 39SC01**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 001 | **Work Order #....:** | LCXND1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/15/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.22 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.067 | J Q J | 1.2 | 0.038 | pg/g |
| Total TCDD | 0.41 | | 1.2 | 0.038 | pg/g |
| 1,2,3,7,8-PeCDD | 0.27 | J J | 5.9 | 0.096 | pg/g |
| Total PeCDD | 0.96 | | 5.9 | 0.096 | pg/g |
| 1,2,3,4,7,8-HxCDD | 0.62 | J J | 5.9 | 0.086 | pg/g |
| 1,2,3,6,7,8-HxCDD | 0.72 | J B J | 5.9 | 0.067 | pg/g |
| 1,2,3,7,8,9-HxCDD | 1.2 | J J | 5.9 | 0.068 | pg/g |
| Total HxCDD | 11 | | 5.9 | 0.073 | pg/g |
| 1,2,3,4,6,7,8-HpCDD | 65 | B | 5.9 | 0.46 | pg/g |
| Total HpCDD | 150 | | 5.9 | 0.46 | pg/g |
| OCDD | 3500 | B | 12 | 3.1 | pg/g |
| 2,3,7,8-TCDF | 0.21 | J B B | 1.2 | 0.020 | pg/g |
| Total TCDF | 0.55 | B | 1.2 | 0.020 | pg/g |
| 1,2,3,7,8-PeCDF | 0.19 | J Q B B | 5.9 | 0.030 | pg/g |
| 2,3,4,7,8-PeCDF | 0.12 | J Q B B | 5.9 | 0.032 | pg/g |
| Total PeCDF | 0.68 | B | 5.9 | 0.031 | pg/g |
| 1,2,3,4,7,8-HxCDF | 0.27 | J B B | 5.9 | 0.027 | pg/g |
| 1,2,3,6,7,8-HxCDF | 0.096 | J Q B B | 5.9 | 0.022 | pg/g |
| 2,3,4,6,7,8-HxCDF | 0.070 | J Q J | 5.9 | 0.024 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 5.9 | 0.029 | pg/g |
| Total HxCDF | 0.86 | B | 5.9 | 0.025 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | 0.20 | J B B | 5.9 | 0.039 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | 0.11 | J Q B B | 5.9 | 0.050 | pg/g |
| Total HpCDF | 0.51 | B | 5.9 | 0.044 | pg/g |
| OCDF | 0.74 | J B B | 12 | 0.065 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39SC01**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 001 | **Work Order #....:** | LCXND1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/15/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.22 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 89 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 80 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 102 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 91 | 40 - 135 |
| 13C-OCDD | 96 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 90 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 85 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 91 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 91 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

J Estimated Result

Q Estimated maximum possible concentration (EMPC)

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**Shaw E & I Inc**

**Sample ID: 39SC03**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 003 | **Work Order #....:** | LCXNN1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/15/09 | **Percent Moisture:** | 24 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.18 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.3 | 0.043 | pg/g |
| Total TCDD | ND | | 1.3 | 0.043 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 6.5 | 0.11 | pg/g |
| Total PeCDD | ND | | 6.5 | 0.11 | pg/g |
| **1,2,3,4,7,8-HxCDD** | 0.17 | J J | 6.5 | 0.065 | pg/g |
| **1,2,3,6,7,8-HxCDD** | 0.17 | J Q B J | 6.5 | 0.051 | pg/g |
| **1,2,3,7,8,9-HxCDD** | 0.39 | J J | 6.5 | 0.051 | pg/g |
| **Total HxCDD** | 2.4 | | 6.5 | 0.055 | pg/g |
| **1,2,3,4,6,7,8-HpCDD** | 19 | B | 6.5 | 0.23 | pg/g |
| **Total HpCDD** | 38 | | 6.5 | 0.23 | pg/g |
| **OCDD** | 1600 | B | 13 | 1.9 | pg/g |
| **2,3,7,8-TCDF** | 0.26 | J Q B B | 1.3 | 0.028 | pg/g |
| **Total TCDF** | 0.42 | B | 1.3 | 0.028 | pg/g |
| **1,2,3,7,8-PeCDF** | 0.25 | J B B | 6.5 | 0.035 | pg/g |
| **2,3,4,7,8-PeCDF** | 0.15 | J B B | 6.5 | 0.037 | pg/g |
| **Total PeCDF** | 0.84 | B | 6.5 | 0.036 | pg/g |
| **1,2,3,4,7,8-HxCDF** | 0.17 | J Q B B | 6.5 | 0.039 | pg/g |
| **1,2,3,6,7,8-HxCDF** | 0.073 | J B B | 6.5 | 0.032 | pg/g |
| **2,3,4,6,7,8-HxCDF** | 0.074 | J Q J | 6.5 | 0.035 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 6.5 | 0.041 | pg/g |
| **Total HxCDF** | 0.82 | B | 6.5 | 0.036 | pg/g |
| **1,2,3,4,6,7,8-HpCDF** | 0.075 | J Q B B | 6.5 | 0.064 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | ND | | 6.5 | 0.082 | pg/g |
| **Total HpCDF** | 0.18 | B | 6.5 | 0.072 | pg/g |
| **OCDF** | 0.48 | J B B | 13 | 0.065 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39SC03**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 003 | **Work Order #....:** | LCXNN1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/15/09 | **Percent Moisture:** | 24 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.18 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 89 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 77 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 91 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 88 | 40 - 135 |
| 13C-OCDD | 94 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 88 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 82 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 89 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 86 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination. The associated method blank contains the target analyte at a reportable level

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 39SC05**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 005 | **Work Order #....:** | LCXNQ1AA | **Matrix.....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/15/09 | **Percent Moisture:** | 19 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.2 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|---|
| **2,3,7,8-TCDD** | **0.048** | **J Q** | J | **1.2** | **0.032** | **pg/g** |
| **Total TCDD** | **0.27** | | | **1.2** | **0.032** | **pg/g** |
| 1,2,3,7,8-PeCDD | ND | | | 6.0 | 0.12 | pg/g |
| Total PeCDD | ND | | | 6.0 | 0.12 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.37** | **J Q** | J | **6.0** | **0.043** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.40** | **J Q B** | J | **6.0** | **0.034** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **1.0** | **J** | J | **6.0** | **0.034** | **pg/g** |
| **Total HxCDD** | **6.0** | | | **6.0** | **0.036** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **73** | **B** | | **6.0** | **0.40** | **pg/g** |
| **Total HpCDD** | **140** | | | **6.0** | **0.40** | **pg/g** |
| **OCDD** | **5100** | **E B** | R | **12** | **1.5** | **pg/g** |
| **2,3,7,8-TCDF** | **0.18** | **J Q B** | B | **1.2** | **0.029** | **pg/g** |
| **Total TCDF** | **0.35** | | B | **1.2** | **0.029** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.24** | **J B** | B | **6.0** | **0.027** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **0.12** | **J Q B** | B | **6.0** | **0.029** | **pg/g** |
| **Total PeCDF** | **0.70** | | B | **6.0** | **0.028** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.28** | **J B** | B | **6.0** | **0.028** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.083** | **J B** | B | **6.0** | **0.023** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.072** | **J Q** | J | **6.0** | **0.025** | **pg/g** |
| **1,2,3,7,8,9-HxCDF** | **0.031** | **J Q B** | B | **6.0** | **0.030** | **pg/g** |
| **Total HxCDF** | **0.94** | | B | **6.0** | **0.026** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.20** | **J B** | B | **6.0** | **0.039** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **0.11** | **J Q B** | B | **6.0** | **0.050** | **pg/g** |
| **Total HpCDF** | **0.51** | | B | **6.0** | **0.044** | **pg/g** |
| **OCDF** | **0.96** | **J B** | B | **12** | **0.050** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39SC05**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 005 | **Work Order #....:** | LCXNQ1AA | **Matrix.....:** | SO |
| **Date Sampled.....:** | 05/12/09 | **Date Received.....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date.....:** | 05/14/09 | **Analysis Date.....:** | 05/15/09 | **Percent Moisture:** | 19 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.2 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 90 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 76 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 104 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 90 | 40 - 135 |
| 13C-OCDD | 98 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 89 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 83 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 95 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 90 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

E Estimated result Result concentration exceeds the calibration range

J Estimated Result

Q Estimated maximum possible concentration (EMPC)

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 39SC05**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 005 | **Work Order #....:** | LCXNQ2AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/19/09 | **Percent Moisture:** | 19 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.2 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | R | 6.0 | 1.3 | pg/g |
| Total TCDD | ND | | 6.0 | 1.3 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 30 | 2.6 | pg/g |
| Total PeCDD | ND | | 30 | 2.6 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 30 | 0.39 | pg/g |
| 1,2,3,6,7,8-HxCDD | ND | | 30 | 0.31 | pg/g |
| **1,2,3,7,8,9-HxCDD** | **0.35** | **J Q** | **30** | **0.31** | **pg/g** |
| **Total HxCDD** | **2.7** | | **30** | **0.33** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **69** | **B** | **30** | **2.9** | **pg/g** |
| **Total HpCDD** | **140** | | **30** | **2.9** | **pg/g** |
| **OCDD** | **5400** | **B** | **60** | **11** | **pg/g** |
| 2,3,7,8-TCDF | ND | R | 6 0 | 2.0 | pg/g |
| Total TCDF | ND | | 6.0 | 2 0 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 30 | 0.74 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 30 | 0.79 | pg/g |
| Total PeCDF | ND | | 30 | 1.6 | pg/g |
| 1,2,3,4,7,8-HxCDF | ND | | 30 | 0.39 | pg/g |
| 1,2,3,6,7,8-HxCDF | ND | | 30 | 0.32 | pg/g |
| 2,3,4,6,7,8-HxCDF | ND | | 30 | 0.35 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 30 | 0.42 | pg/g |
| Total HxCDF | ND | | 30 | 0.42 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | ND | | 30 | 0.48 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | ND | | 30 | 0.61 | pg/g |
| Total HpCDF | ND | | 30 | 0.61 | pg/g |
| OCDF | ND | | 60 | 1.7 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39SC05**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 005 | **Work Order #....:** | LCXNQ2AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/19/09 | **Percent Moisture:** | 19 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.2 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 91 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 83 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 134 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 86 | 40 - 135 |
| 13C-OCDD | 96 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 87 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 85 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 80 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 85 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39SC07**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 007 | **Work Order #....:** | LCXNV1AA | **Matrix.....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.16 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|---|
| **2,3,7,8-TCDD** | **0.073** | **J Q** | J | **1.2** | **0.026** | **pg/g** |
| **Total TCDD** | **0.16** | | | **1.2** | **0.026** | **pg/g** |
| 1,2,3,7,8-PeCDD | ND | | | 6.1 | 0.090 | pg/g |
| Total PeCDD | ND | | | 6.1 | 0.090 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.24** | **J Q** | J | **6.1** | **0.067** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.30** | **J Q B** | J | **6.1** | **0.052** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.81** | **J** | J | **6.1** | **0.053** | **pg/g** |
| **Total HxCDD** | **2.9** | | | **6.1** | **0.057** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **30** | **B** | | **6.1** | **0.36** | **pg/g** |
| **Total HpCDD** | **53** | | | **6.1** | **0.36** | **pg/g** |
| **OCDD** | **1900** | **B** | | **12** | **2.1** | **pg/g** |
| **2,3,7,8-TCDF** | **0.21** | **J B** | B | **1.2** | **0.015** | **pg/g** |
| **Total TCDF** | **0.37** | | B | **1.2** | **0.015** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.15** | **J Q B** | B | **6.1** | **0.042** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **0.064** | **J Q B** | B | **6.1** | **0.045** | **pg/g** |
| **Total PeCDF** | **0.47** | | B | **6.1** | **0.044** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.28** | **J B** | B | **6.1** | **0.027** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.084** | **J B** | B | **6.1** | **0.022** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.058** | **J Q** | J | **6.1** | **0.024** | **pg/g** |
| **1,2,3,7,8,9-HxCDF** | **0.055** | **J Q B** | B | **6.1** | **0.029** | **pg/g** |
| **Total HxCDF** | **0.84** | | B | **6.1** | **0.026** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.23** | **J B** | B | **6.1** | **0.049** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **0.17** | **J Q B** | B | **6.1** | **0.063** | **pg/g** |
| **Total HpCDF** | **0.48** | | B | **6.1** | **0.056** | **pg/g** |
| **OCDF** | **0.19** | **J Q B** | B | **12** | **0.039** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39SC07**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 007 | **Work Order #....:** | LCXNV1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.16 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 86 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 71 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 86 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 95 | 40 - 135 |
| 13C-OCDD | 117 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 84 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 74 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 83 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 89 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

J Estimated Result

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39SC08**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 008 | **Work Order #....:** | LCXNW1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.29 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.027 | pg/g |
| **Total TCDD** | **0.14** | | **1.2** | **0.027** | **pg/g** |
| 1,2,3,7,8-PeCDD | ND | | 5.9 | 0.11 | pg/g |
| Total PeCDD | ND | | 5.9 | 0.11 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.30** | **J Q** J | 5.9 | **0.052** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.26** | **J Q B** J | 5.9 | **0.041** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.82** | **J** J | 5.9 | **0.042** | **pg/g** |
| **Total HxCDD** | **4.1** | | 5.9 | **0.044** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **51** | **B** | 5.9 | **0.63** | **pg/g** |
| **Total HpCDD** | **99** | | 5.9 | **0.63** | **pg/g** |
| **OCDD** | **5200** | **E B** R | 12 | **4.5** | **pg/g** |
| **2,3,7,8-TCDF** | **0.15** | **J Q B** B | 1.2 | **0.022** | **pg/g** |
| **Total TCDF** | **0.36** | B | 1.2 | **0.022** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.23** | **J B** B | 5.9 | **0.034** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **0.12** | **J Q B** B | 5.9 | **0.037** | **pg/g** |
| **Total PeCDF** | **0.76** | B | 5.9 | **0.035** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.29** | **J B** B | 5.9 | **0.026** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.073** | **J B** B | 5.9 | **0.022** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.12** | **J** J | 5.9 | **0.023** | **pg/g** |
| **1,2,3,7,8,9-HxCDF** | **0.037** | **J B** B | 5.9 | **0.028** | **pg/g** |
| **Total HxCDF** | **1.1** | B | 5.9 | **0.025** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.23** | **J Q B** B | 5.9 | **0.053** | **pg/g** |
| **1,2,3,4,7.8,9-HpCDF** | **0.17** | **J Q B** B | 5.9 | **0.068** | **pg/g** |
| **Total HpCDF** | **0.60** | B | 5.9 | **0.060** | **pg/g** |
| **OCDF** | **1.1** | **J B** J | 12 | **0.059** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39SC08**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 008 | **Work Order #....:** | LCXNW1AA | **Matrix.....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.29 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 87 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 71 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 84 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 86 | 40 - 135 |
| 13C-OCDD | 104 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 85 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 76 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 81 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 82 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

E Estimated result. Result concentration exceeds the calibration range

J Estimated Result.

Q Estimated maximum possible concentration (EMPC)

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**Shaw E & I Inc**

**Sample ID: 39SC08**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 008 | **Work Order #....:** | LCXNW2AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/18/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.29 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | R | 5.9 | 1 4 | pg/g |
| Total TCDD | ND | | 5.9 | 1.4 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 30 | 2.0 | pg/g |
| Total PeCDD | ND | | 30 | 2.0 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 30 | 0.74 | pg/g |
| 1,2,3,6,7,8-HxCDD | ND | | 30 | 0.58 | pg/g |
| **1,2,3,7,8,9-HxCDD** | **0.85** | **J Q** | **30** | **0.59** | **pg/g** |
| **Total HxCDD** | **2.8** | | **30** | **0.63** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **59** | **B** | **30** | **1.4** | **pg/g** |
| **Total HpCDD** | **120** | | **30** | **1.4** | **pg/g** |
| **OCDD** | **5300** | **B** | **59** | **2.3** | **pg/g** |
| 2,3,7,8-TCDF | ND | R | 5.9 | 1.9 | pg/g |
| Total TCDF | ND | | 5.9 | 1.9 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 30 | 0.81 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 30 | 0.86 | pg/g |
| Total PeCDF | ND | | 30 | 1.6 | pg/g |
| **1,2,3,4,7,8-HxCDF** | **0.42** | **J Q B** | **30** | **0.36** | **pg/g** |
| 1,2,3,6,7,8-HxCDF | ND | | 30 | 0.29 | pg/g |
| 2,3,4,6,7,8-HxCDF | ND | | 30 | 0.32 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 30 | 0.38 | pg/g |
| **Total HxCDF** | **1.2** | | **30** | **0.33** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.80** | **J B** | **30** | **0.52** | **pg/g** |
| 1,2,3,4,7,8,9-HpCDF | ND | | 30 | 0.66 | pg/g |
| **Total HpCDF** | **0.79** | | **30** | **0.58** | **pg/g** |
| OCDF | ND | | 59 | 1.5 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39SC08**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 008 | **Work Order #....:** | LCXNW2AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/18/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.29 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 88 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 80 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 117 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 77 | 40 - 135 |
| 13C-OCDD | 83 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 79 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 72 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 79 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 75 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination. The associated method blank contains the target analyte at a reportable level

J Estimated Result

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39SC10**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 010 | **Work Order #....:** | LCXN21AA | **Matrix.....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID.....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.08 g | **Analyst ID.....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.12 | J Q H R | 1.2 | 0.055 | pg/g |
| Total TCDD | 0.94 | | 1.2 | 0.055 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 5.9 | 0.23 | pg/g |
| Total PeCDD | 1.7 | | 5.9 | 0.23 | pg/g |
| 1,2,3,4,7,8-HxCDD | 0.88 | J | 5.9 | 0.14 | pg/g |
| 1,2,3,6,7,8-HxCDD | 0.94 | J B | 5.9 | 0.11 | pg/g |
| 1,2,3,7,8,9-HxCDD | 1.8 | J | 5.9 | 0.11 | pg/g |
| Total HxCDD | 15 | | 5.9 | 0.12 | pg/g |
| 1,2,3,4,6,7,8-HpCDD | 110 | B | 5.9 | 1.3 | pg/g |
| Total HpCDD | 220 | | 5.9 | 1.3 | pg/g |
| OCDD | 9500 | E B | 12 | 8.0 | pg/g |
| 2,3,7,8-TCDF | 0.72 | J B | 1.2 | 0.034 | pg/g |
| Total TCDF | 2.7 | | 1.2 | 0.034 | pg/g |
| 1,2,3,7,8-PeCDF | 0.57 | J B | 5.9 | 0.11 | pg/g |
| 2,3,4,7,8-PeCDF | 0.31 | J Q B | 5.9 | 0.11 | pg/g |
| Total PeCDF | 3.7 | | 5.9 | 0.11 | pg/g |
| 1,2,3,4,7,8-HxCDF | 1.4 | J B | 5.9 | 0.11 | pg/g |
| 1,2,3,6,7,8-HxCDF | 0.40 | J B | 5.9 | 0.088 | pg/g |
| 2,3,4,6,7,8-HxCDF | 0.53 | J Q | 5.9 | 0.097 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 5 9 | 0 12 | pg/g |
| Total HxCDF | 4.6 | | 5.9 | 0.10 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | 1.7 | J B | 5.9 | 0.11 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | 0.38 | J B | 5.9 | 0.13 | pg/g |
| Total HpCDF | 2.8 | | 5.9 | 0.12 | pg/g |
| OCDF | 2.3 | J B | 12 | 0.073 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39SC10**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 010 | **Work Order #....:** | LCXN21AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.08 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | | RECOVERY LIMITS |
|---|---|---|---|
| 13C-2,3,7,8-TCDD | 52 | | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 38 | * | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 50 | | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 43 | | 40 - 135 |
| 13C-OCDD | 50 | | 40 - 135 |
| 13C-2,3,7,8-TCDF | 50 | | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 42 | | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 39 | * | 40 - 135 |
| 13C-1,2,3,4.6,7,8-HpCDF | 41 | | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

| | |
|---|---|
| I | H Preliminary data Due to low IS recoveries this sample will be re-extracted and re-analyzed |
| * | Surrogate recovery is outside stated control limits |
| B | Method blank contamination. The associated method blank contains the target analyte at a reportable level. |
| E | Estimated result. Result concentration exceeds the calibration range. |
| J | Estimated Result. |
| Q | Estimated maximum possible concentration (EMPC). |

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**Shaw E & I Inc**

**Sample ID: 39SC10**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 010 | **Work Order #....:** | LCXN22AA | **Matrix.....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/19/09 | **Analysis Date....:** | 05/20/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9139468 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.07 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | R | 5.9 | 0.56 | pg/g |
| Total TCDD | ND | | 5.9 | 0.56 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 30 | 1.2 | pg/g |
| Total PeCDD | ND | | 30 | 1.2 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 30 | 0.67 | pg/g |
| **1,2,3,6,7,8-HxCDD** | **1.2** | **J** | **30** | **0.53** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **1.0** | **J Q** | **30** | **0.53** | **pg/g** |
| **Total HxCDD** | **11** | | **30** | **0.57** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **110** | **B** | **30** | **2.5** | **pg/g** |
| **Total HpCDD** | **220** | | **30** | **2.5** | **pg/g** |
| **OCDD** | **9600** | **B** | **59** | **9.8** | **pg/g** |
| 2,3,7,8-TCDF | ND | R | 5.9 | 0.56 | pg/g |
| Total TCDF | ND | | 5.9 | 0.56 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 30 | 0.45 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 30 | 0.49 | pg/g |
| Total PeCDF | ND | | 30 | 0.48 | pg/g |
| **1,2,3,4,7,8-HxCDF** | **1.6** | **J Q B** | **30** | **0.37** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.52** | **J B** | **30** | **0.31** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.90** | **J B** | **30** | **0.34** | **pg/g** |
| 1,2,3,7,8,9-HxCDF | ND | | 30 | 0.40 | pg/g |
| **Total HxCDF** | **3.0** | | **30** | **0.35** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **1.9** | **J B** | **30** | **0.55** | **pg/g** |
| 1,2,3,4,7,8,9-HpCDF | ND | | 30 | 0.70 | pg/g |
| **Total HpCDF** | **2.8** | | **30** | **0.62** | **pg/g** |
| **OCDF** | **3.4** | **J Q** | **59** | **0.76** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39SC10**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 010 | **Work Order #....:** | LCXN22AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/19/09 | **Analysis Date....:** | 05/20/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9139468 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.07 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 63 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 50 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 74 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 59 | 40 - 135 |
| 13C-OCDD | 69 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 57 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 51 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 62 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 64 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

J Estimated Result

Q Estimated maximum possible concentration (EMPC)

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 39SC10**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 010 | **Work Order #....:** | LCXN24AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/19/09 | **Analysis Date....:** | 05/21/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9139468 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.07 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.20 | pg/g |
| Total TCDD | ND | | 1.2 | 0.20 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 5.9 | 0.38 | pg/g |
| **Total PeCDD** | **0.86** | | 5.9 | **0.38** | pg/g |
| **1,2,3,4,7,8-HxCDD** | **1.6** | **J** J | 5.9 | **0.41** | pg/g |
| **1,2,3,6,7,8-HxCDD** | **1.4** | **J** J | 5.9 | **0.32** | pg/g |
| **1,2,3,7,8,9-HxCDD** | **2.1** | **J** J | 5.9 | **0.33** | pg/g |
| **Total HxCDD** | **18** | J | 5.9 | **0.35** | pg/g |
| **1,2,3,4,6,7,8-HpCDD** | **97** | **B** | 5.9 | **2.3** | pg/g |
| **Total HpCDD** | **180** | | 5.9 | **2.3** | pg/g |
| **OCDD** | **8700** | **E B** R | 12 | **7.6** | pg/g |
| **2,3,7,8-TCDF** | **0.40** | **J** J | 1.2 | **0.12** | pg/g |
| **Total TCDF** | **0.79** | | 1.2 | **0.12** | pg/g |
| **1,2,3,7,8-PeCDF** | **0.52** | **J Q B** B | 5.9 | **0.13** | pg/g |
| **2,3,4,7,8-PeCDF** | **0.28** | **J Q** B | 5.9 | **0.14** | pg/g |
| **Total PeCDF** | **1.9** | | 5.9 | **0.13** | pg/g |
| **1,2,3,4,7,8-HxCDF** | **1.4** | **J B** B | 5.9 | **0.18** | pg/g |
| **1,2,3,6,7,8-HxCDF** | **0.42** | **J Q B** J | 5.9 | **0.14** | pg/g |
| **2,3,4,6,7,8-HxCDF** | **0.53** | **J B** J | 5.9 | **0.16** | pg/g |
| **1,2,3,7,8,9-HxCDF** | **0.25** | **J Q B** B | 5.9 | **0.19** | pg/g |
| **Total HxCDF** | **5.0** | B | 5.9 | **0.16** | pg/g |
| **1,2,3,4,6,7,8-HpCDF** | **2.7** | **J B** J | 5.9 | **0.55** | pg/g |
| **1,2,3,4,7,8,9-HpCDF** | **1.2** | **J B** B | 5.9 | **0.70** | pg/g |
| **Total HpCDF** | **5.7** | J | 5.9 | **0.62** | pg/g |
| **OCDF** | **3.2** | **J Q** J | 12 | **0.28** | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39SC10**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 010 | **Work Order #....:** | LCXN24AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/19/09 | **Analysis Date....:** | 05/21/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9139468 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.07 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 58 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 52 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 60 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 62 | 40 - 135 |
| 13C-OCDD | 65 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 59 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 53 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 70 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 58 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

E Estimated result. Result concentration exceeds the calibration range

J Estimated Result

Q Estimated maximum possible concentration (EMPC)

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**Shaw E & I Inc**

**Sample ID: 39SC10**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 010 | **Work Order #....:** | LCXN23AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/18/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.08 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | R | 5.9 | 1.6 | pg/g |
| Total TCDD | ND | | 5.9 | 1.6 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 30 | 3 5 | pg/g |
| Total PeCDD | ND | | 30 | 3.5 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **1.1** | **J** | **30** | **1.1** | **pg/g** |
| 1,2,3,6,7,8-HxCDD | ND | | 30 | 0.83 | pg/g |
| **1,2,3,7,8,9-HxCDD** | **1.8** | **J Q** | **30** | **0.84** | **pg/g** |
| **Total HxCDD** | **12** | | **30** | **0.90** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **130** | **B** | **30** | **3.9** | **pg/g** |
| **Total HpCDD** | **260** | | **30** | **3.9** | **pg/g** |
| **OCDD** | **10000** | **B** | **59** | **7.7** | **pg/g** |
| 2,3,7,8-TCDF | ND | | 5.9 | 3.3 | pg/g |
| Total TCDF | ND | | 5.9 | 3.3 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 30 | 1.2 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 30 | 1.3 | pg/g |
| Total PeCDF | ND | | 30 | 2.3 | pg/g |
| **1,2,3,4,7,8-HxCDF** | **1.6** | **J B** | **30** | **0.47** | **pg/g** |
| 1,2,3,6,7,8-HxCDF | ND | | 30 | 0.38 | pg/g |
| **2,3,4,6,7,8-HxCDF** | **0.61** | **J** | **30** | **0.42** | **pg/g** |
| 1,2,3,7,8,9-HxCDF | ND | | 30 | 0.50 | pg/g |
| **Total HxCDF** | **3.3** | | **30** | **0.44** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **1.5** | **J B** | **30** | **0.86** | **pg/g** |
| 1,2,3,4,7,8,9-HpCDF | ND | | 30 | 1.1 | pg/g |
| **Total HpCDF** | **2.2** | | **30** | **0.96** | **pg/g** |
| OCDF | ND | | 59 | 2.2 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39SC10**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 010 | **Work Order #....:** | LCXN23AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/18/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.08 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 52 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 47 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 61 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 42 | 40 - 135 |
| 13C-OCDD | 46 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 47 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 44 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 40 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 43 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39TMSC01**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 011 | **Work Order #....:** | LCXN31AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.17 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.068 | J Q J | 1.2 | 0.048 | pg/g |
| Total TCDD | 0.21 | | 1.2 | 0.048 | pg/g |
| 1,2,3,7,8-PeCDD | 0.11 | J Q J | 5.9 | 0.10 | pg/g |
| Total PeCDD | 0.86 | | 5.9 | 0.10 | pg/g |
| 1,2,3,4,7,8-HxCDD | 0.50 | J Q J | 5.9 | 0.13 | pg/g |
| 1,2,3,6,7,8-HxCDD | 0.57 | J Q B J | 5.9 | 0.10 | pg/g |
| 1,2,3,7,8,9-HxCDD | 0.93 | J J | 5.9 | 0.10 | pg/g |
| Total HxCDD | 9.0 | J | 5.9 | 0.11 | pg/g |
| 1,2,3,4,6,7,8-HpCDD | 68 | B | 5.9 | 0.46 | pg/g |
| Total HpCDD | 140 | | 5.9 | 0.46 | pg/g |
| OCDD | 5800 | E B R | 12 | 3.9 | pg/g |
| 2,3,7,8-TCDF | 0.33 | J B B | 1.2 | 0.013 | pg/g |
| Total TCDF | 1.1 | B | 1.2 | 0.013 | pg/g |
| 1,2,3,7,8-PeCDF | 0.27 | J B B | 5.9 | 0.031 | pg/g |
| 2,3,4,7,8-PeCDF | 0.15 | J Q B B | 5.9 | 0.033 | pg/g |
| Total PeCDF | 1.4 | B | 5.9 | 0.032 | pg/g |
| 1,2,3,4,7,8-HxCDF | 0.44 | J B B | 5.9 | 0.043 | pg/g |
| 1,2,3,6,7,8-HxCDF | 0.12 | J Q B B | 5.9 | 0.035 | pg/g |
| 2,3,4,6,7,8-HxCDF | 0.17 | J J | 5.9 | 0.039 | pg/g |
| 1,2,3,7,8,9-HxCDF | 0.25 | J Q B J | 5.9 | 0.046 | pg/g |
| Total HxCDF | 1.7 | B | 5.9 | 0.040 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | 0.65 | J B J | 5.9 | 0.047 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | 0.12 | J B B | 5.9 | 0.060 | pg/g |
| Total HpCDF | 1.1 | | 5.9 | 0.052 | pg/g |
| OCDF | 1.3 | J B J | 12 | 0.038 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39TMSC01**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 011 | **Work Order #....:** | LCXN31AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.17 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 87 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 70 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 91 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 91 | 40 - 135 |
| 13C-OCDD | 110 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 87 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 77 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 78 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 86 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination The associated method blank contains the target analyte at a reportable level

E Estimated result. Result concentration exceeds the calibration range

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39TMSC01**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 011 | **Work Order #....:** | LCXN32AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 10 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/18/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.17 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 12 | 2.6 | pg/g |
| Total TCDD | ND | | 12 | 2.6 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 59 | 2.7 | pg/g |
| Total PeCDD | ND | | 59 | 2.7 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 59 | 1.1 | pg/g |
| 1,2,3,6,7,8-HxCDD | ND | | 59 | 0.90 | pg/g |
| **1,2,3,7,8,9-HxCDD** | **0.99** | **J Q** | **59** | **0.91** | **pg/g** |
| **Total HxCDD** | **6.0** | | **59** | **0.97** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **94** | **B** | **59** | **4.0** | **pg/g** |
| **Total HpCDD** | **190** | | **59** | **4.0** | **pg/g** |
| **OCDD** | **6500** | **B** | **120** | **6.4** | **pg/g** |
| 2,3,7,8-TCDF | ND | | 12 | 4.7 | pg/g |
| Total TCDF | ND | | 12 | 4.7 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 59 | 1.5 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 59 | 1.6 | pg/g |
| Total PeCDF | ND | | 59 | 2.9 | pg/g |
| 1,2,3,4,7,8-HxCDF | ND | | 59 | 1.0 | pg/g |
| 1,2,3,6,7,8-HxCDF | ND | | 59 | 0.85 | pg/g |
| 2,3,4,6,7,8-HxCDF | ND | | 59 | 0.93 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 59 | 1.1 | pg/g |
| Total HxCDF | ND | | 59 | 1.1 | pg/g |
| **1,2,3,4,6,7,8-HpCDF** | **1.3** | **J B** | **59** | **0.54** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **1.3** | **J B** | **59** | **0.70** | **pg/g** |
| **Total HpCDF** | **2.6** | | **59** | **0.61** | **pg/g** |
| OCDF | ND | | 120 | 2.5 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39TMSC01**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 011 | **Work Order #....:** | LCXN32AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 10 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/18/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.17 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 83 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 76 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 113 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 77 | 40 - 135 |
| 13C-OCDD | 76 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 77 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 75 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 69 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 77 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

J Estimated Result

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39SC12**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 013 | **Work Order #....:** | LCXN51AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| **2,3,7,8-TCDD** | **0.055** | **J Q** J | **1.2** | **0.030** | **pg/g** |
| **Total TCDD** | **0.13** | | **1.2** | **0.030** | **pg/g** |
| 1,2,3,7,8-PeCDD | ND | | 6.2 | 0.14 | pg/g |
| Total PeCDD | ND | | 6.2 | 0.14 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.21** | **J Q** J | **6.2** | **0.090** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.27** | **J Q B** J | **6.2** | **0.071** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.59** | **J** J | **6.2** | **0.071** | **pg/g** |
| **Total HxCDD** | **3.8** | | **6.2** | **0.076** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **27** | **B** | **6.2** | **0.40** | **pg/g** |
| **Total HpCDD** | **55** | | **6.2** | **0.40** | **pg/g** |
| **OCDD** | **3500** | **B** | **12** | **4.0** | **pg/g** |
| **2,3,7,8-TCDF** | **0.23** | **J B** B | **1.2** | **0.010** | **pg/g** |
| **Total TCDF** | **0.64** | B | **1.2** | **0.010** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.18** | **J Q B** B | **6.2** | **0.036** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **0.13** | **J Q B** B | **6.2** | **0.038** | **pg/g** |
| **Total PeCDF** | **0.96** | B | **6.2** | **0.037** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.30** | **J Q B** B | **6.2** | **0.033** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.10** | **J B** B | **6.2** | **0.027** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.13** | **J** J | **6.2** | **0.030** | **pg/g** |
| 1,2,3,7,8,9-HxCDF | ND | | 6.2 | 0.036 | pg/g |
| **Total HxCDF** | **1.4** | B | **6.2** | **0.031** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.44** | **J Q B** J | **6.2** | **0.050** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **0.15** | **J Q B** B | **6.2** | **0.064** | **pg/g** |
| **Total HpCDF** | **1.4** | | **6.2** | **0.056** | **pg/g** |
| **OCDF** | **1.6** | **J B** J | **12** | **0.046** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39SC12**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 013 | **Work Order #....:** | LCXN51AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 20 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.02 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 86 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 68 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 76 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 79 | 40 - 135 |
| 13C-OCDD | 94 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 83 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 73 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 72 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 72 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

- B Method blank contamination The associated method blank contains the target analyte at a reportable level.
- J Estimated Result.
- Q Estimated maximum possible concentration (EMPC)

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**Shaw E & I Inc**

**Sample ID: 39SC14**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 015 | **Work Order #....:** | LCXN81AA | **Matrix.....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.1 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| **2,3,7,8-TCDD** | **0.055** | **J Q** | **1.2** | **0.033** | **pg/g** |
| **Total TCDD** | **0.055** | | **1.2** | **0.033** | **pg/g** |
| 1,2,3,7,8-PeCDD | ND | | 5.9 | 0.12 | pg/g |
| Total PeCDD | ND | | 5.9 | 0.12 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.13** | **J Q** | **5.9** | **0.090** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.099** | **J Q B** | **5.9** | **0.071** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.33** | **J** | **5.9** | **0.072** | **pg/g** |
| **Total HxCDD** | **1.3** | | **5.9** | **0.077** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **23** | **B** | **5.9** | **0.63** | **pg/g** |
| **Total HpCDD** | **40** | | **5.9** | **0.63** | **pg/g** |
| **OCDD** | **2300** | **B** | **12** | **1.8** | **pg/g** |
| **2,3,7,8-TCDF** | **0.21** | **J Q B** | **1.2** | **0.020** | **pg/g** |
| **Total TCDF** | **0.45** | | **1.2** | **0.020** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.28** | **J B** | **5.9** | **0.045** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **0.12** | **J B** | **5.9** | **0.049** | **pg/g** |
| **Total PeCDF** | **0.85** | | **5.9** | **0.047** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.31** | **J Q B** | **5.9** | **0.017** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.055** | **J Q B** | **5.9** | **0.014** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.075** | **J** | **5.9** | **0.015** | **pg/g** |
| **1,2,3,7,8,9-HxCDF** | **0.059** | **J B** | **5.9** | **0.018** | **pg/g** |
| **Total HxCDF** | **1.1** | | **5.9** | **0.016** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.19** | **J Q B** | **5.9** | **0.073** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **0.13** | **J B** | **5.9** | **0.093** | **pg/g** |
| **Total HpCDF** | **0.48** | | **5.9** | **0.081** | **pg/g** |
| **OCDF** | **0.47** | **J B** | **12** | **0.032** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39SC14**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 015 | **Work Order #....:** | LCXN81AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 16 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.1 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 68 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 52 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 52 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 54 | 40 - 135 |
| 13C-OCDD | 60 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 65 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 56 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 52 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 50 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39SC16**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 017 | **Work Order #....:** | LCXPA1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 22 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.1 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| **2,3,7,8-TCDD** | 0.042 | J Q J | 1.3 | 0.013 | pg/g |
| **Total TCDD** | 0.070 | | 1.3 | 0.013 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 6.3 | 0.11 | pg/g |
| Total PeCDD | ND | | 6.3 | 0.11 | pg/g |
| **1,2,3,4,7,8-HxCDD** | 0.11 | J Q J | 6.3 | 0.071 | pg/g |
| **1,2,3,6,7,8-HxCDD** | 0.11 | J Q B B | 6.3 | 0.056 | pg/g |
| **1,2,3,7,8,9-HxCDD** | 0.38 | J J | 6.3 | 0.057 | pg/g |
| **Total HxCDD** | 1.5 | | 6.3 | 0.061 | pg/g |
| **1,2,3,4,6,7,8-HpCDD** | 15 | B | 6.3 | 0.29 | pg/g |
| **Total HpCDD** | 27 | | 6.3 | 0.29 | pg/g |
| **OCDD** | 1500 | B | 13 | 1.1 | pg/g |
| **2,3,7,8-TCDF** | 0.18 | J Q B B | 1.3 | 0.0028 | pg/g |
| **Total TCDF** | 0.47 | B | 1.3 | 0.0028 | pg/g |
| **1,2,3,7,8-PeCDF** | 0.18 | J Q B B | 6.3 | 0.042 | pg/g |
| **2,3,4,7,8-PeCDF** | 0.14 | J Q B B | 6.3 | 0.045 | pg/g |
| **Total PeCDF** | 0.52 | B | 6.3 | 0.043 | pg/g |
| **1,2,3,4,7,8-HxCDF** | 0.23 | J Q B B | 6.3 | 0.014 | pg/g |
| **1,2,3,6,7,8-HxCDF** | 0.053 | J Q B B | 6.3 | 0.012 | pg/g |
| **2,3,4,6,7,8-HxCDF** | 0.053 | J Q J | 6.3 | 0.013 | pg/g |
| **1,2,3,7,8,9-HxCDF** | 0.030 | J Q B B | 6.3 | 0.015 | pg/g |
| **Total HxCDF** | 0.87 | B | 6.3 | 0.014 | pg/g |
| **1,2,3,4,6,7,8-HpCDF** | 0.17 | J Q B B | 6.3 | 0.042 | pg/g |
| **1,2,3,4,7,8,9-HpCDF** | 0.089 | J Q B B | 6.3 | 0.054 | pg/g |
| **Total HpCDF** | 0.53 | B | 6.3 | 0.047 | pg/g |
| **OCDF** | 0.85 | J Q B B | 13 | 0.042 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39SC16**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 017 | **Work Order #....:** | LCXPA1AA | **Matrix.....:** | SO |
| **Date Sampled.....:** | 05/12/09 | **Date Received.....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date.....:** | 05/14/09 | **Analysis Date.....:** | 05/16/09 | **Percent Moisture:** | 22 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID.....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.1 g | **Analyst ID.....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 93 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 72 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 79 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 79 | 40 - 135 |
| 13C-OCDD | 86 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 92 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 78 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 79 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 73 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39SC18**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 019 | **Work Order #....:** | LCXPD1AA | **Matrix.....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date.....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.27 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.027 | J Q J | 1.2 | 0.021 | pg/g |
| Total TCDD | 0.061 | | 1.2 | 0.021 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 6.0 | 0.085 | pg/g |
| Total PeCDD | 0.099 | | 6.0 | 0.085 | pg/g |
| 1,2,3,4,7,8-HxCDD | 0.22 | J J | 6.0 | 0.045 | pg/g |
| 1,2,3,6,7,8-HxCDD | 0.17 | J Q B J | 6.0 | 0.035 | pg/g |
| 1,2,3,7,8,9-HxCDD | 0.38 | J J | 6.0 | 0.036 | pg/g |
| Total HxCDD | 2.6 | | 6.0 | 0.038 | pg/g |
| 1,2,3,4,6,7,8-HpCDD | 33 | B | 6.0 | 0.25 | pg/g |
| Total HpCDD | 57 | | 6.0 | 0.25 | pg/g |
| OCDD | 3500 | B | 12 | 2.7 | pg/g |
| 2,3,7,8-TCDF | 0.22 | J Q B B | 1.2 | 0.013 | pg/g |
| Total TCDF | 0.59 | B | 1.2 | 0.013 | pg/g |
| 1,2,3,7,8-PeCDF | 0.17 | J Q B B | 6.0 | 0.038 | pg/g |
| 2,3,4,7,8-PeCDF | 0.092 | J Q B B | 6.0 | 0.040 | pg/g |
| Total PeCDF | 0.87 | B | 6.0 | 0.039 | pg/g |
| 1,2,3,4,7,8-HxCDF | 0.34 | J B B | 6.0 | 0.013 | pg/g |
| 1,2,3,6,7,8-HxCDF | 0.12 | J B B | 6.0 | 0.011 | pg/g |
| 2,3,4,6,7,8-HxCDF | 0.16 | J Q J | 6.0 | 0.012 | pg/g |
| 1,2,3,7,8,9-HxCDF | 0.024 | J Q B B | 6.0 | 0.014 | pg/g |
| Total HxCDF | 1.3 | B | 6.0 | 0.012 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | 0.42 | J B J | 6.0 | 0.051 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | 0.088 | J Q B B | 6.0 | 0.065 | pg/g |
| Total HpCDF | 0.83 | B | 6.0 | 0.057 | pg/g |
| OCDF | 0.67 | J B B | 12 | 0.021 | pg/g |

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**Shaw E & I Inc**

**Sample ID: 39SC18**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 019 | **Work Order #....:** | LCXPD1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.27 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 93 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 76 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 84 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 87 | 40 - 135 |
| 13C-OCDD | 103 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 90 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 80 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 84 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 81 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination The associated method blank contains the target analyte at a reportable level

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39SC19**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 020 | **Work Order #....:** | LCXPE1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.09 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.031 | pg/g |
| Total TCDD | ND | | 1.2 | 0.031 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 6.0 | 0.092 | pg/g |
| **Total PeCDD** | **0.12** | | **6.0** | **0.092** | **pg/g** |
| 1,2,3,4,7,8-HxCDD | ND | | 6.0 | 0.083 | pg/g |
| 1,2,3,6,7,8-HxCDD | ND | B | 6.0 | 0.066 | pg/g |
| **1,2,3,7,8,9-HxCDD** | **0.46** | **J** J | **6.0** | **0.066** | **pg/g** |
| **Total HxCDD** | **1.0** | | **6.0** | **0.071** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **9.9** | **B** | **6.0** | **0.31** | **pg/g** |
| **Total HpCDD** | **17** | | **6.0** | **0.31** | **pg/g** |
| **OCDD** | **700** | **B** | **12** | **0.57** | **pg/g** |
| **2,3,7,8-TCDF** | **0.21** | **J B** B | **1.2** | **0.011** | **pg/g** |
| **Total TCDF** | **0.37** | B | **1.2** | **0.011** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.21** | **J Q B** B | **6.0** | **0.033** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **0.038** | **J B** B | **6.0** | **0.035** | **pg/g** |
| **Total PeCDF** | **0.70** | B | **6.0** | **0.034** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.20** | **J B** B | **6.0** | **0.019** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.042** | **J Q B** B | **6.0** | **0.016** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.057** | **J Q** J | **6.0** | **0.017** | **pg/g** |
| 1,2,3,7,8,9-HxCDF | ND | | 6 0 | 0.020 | pg/g |
| **Total HxCDF** | **0.78** | B | **6.0** | **0.018** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.11** | **J B** B | **6.0** | **0.043** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **0.075** | **J Q B** B | **6.0** | **0.055** | **pg/g** |
| **Total HpCDF** | **0.33** | B | **6.0** | **0.049** | **pg/g** |
| **OCDF** | **0.25** | **J Q B** B | **12** | **0.050** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39SC19**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 020 | **Work Order #....:** | LCXPE1AA | **Matrix.....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | ***Dilution Factor:*** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.09 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 90 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 74 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 88 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 82 | 40 - 135 |
| 13C-OCDD | 87 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 86 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 77 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 79 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 75 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39TMSC02**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 021 | **Work Order #....:** | LCXPG1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.25 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| **2,3,7,8-TCDD** | **0.032** | **J Q** J | **1.2** | **0.026** | **pg/g** |
| **Total TCDD** | **0.061** | | **1.2** | **0.026** | **pg/g** |
| 1,2,3,7,8-PeCDD | ND | | 5.9 | 0.077 | pg/g |
| Total PeCDD | ND | | 5.9 | 0.077 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.058** | **J Q** J | **5.9** | **0.051** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.088** | **J Q B** B | **5.9** | **0.040** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.37** | **J Q** J | **5.9** | **0.040** | **pg/g** |
| **Total HxCDD** | **1.3** | | **5.9** | **0.043** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **11** | **B** | **5.9** | **0.29** | **pg/g** |
| **Total HpCDD** | **18** | | **5.9** | **0.29** | **pg/g** |
| **OCDD** | **810** | **B** | **12** | **1.3** | **pg/g** |
| **2,3,7,8-TCDF** | **0.22** | **J Q B** B | **1.2** | **0.0021** | **pg/g** |
| **Total TCDF** | **0.43** | B | **1.2** | **0.0021** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.17** | **J Q B** B | **5.9** | **0.012** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **0.067** | **J Q B** B | **5.9** | **0.013** | **pg/g** |
| **Total PeCDF** | **0.66** | B | **5.9** | **0.012** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.26** | **J B** B | **5.9** | **0.021** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.053** | **J Q B** B | **5.9** | **0.017** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.049** | **J Q** J | **5.9** | **0.019** | **pg/g** |
| **1,2,3,7,8,9-HxCDF** | **0.075** | **J Q B** B | **5.9** | **0.023** | **pg/g** |
| **Total HxCDF** | **0.81** | B | **5.9** | **0.020** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.082** | **J Q B** B | **5.9** | **0.044** | **pg/g** |
| 1,2,3,4,7,8,9-HpCDF | ND | | 5.9 | 0.056 | pg/g |
| **Total HpCDF** | **0.19** | B | **5.9** | **0.049** | **pg/g** |
| **OCDF** | **0.31** | **J B** B | **12** | **0.018** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39TMSC02**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 021 | **Work Order #....:** | LCXPG1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/16/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.25 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 90 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 71 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 81 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 82 | 40 - 135 |
| 13C-OCDD | 93 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 86 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 76 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 80 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 77 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC)

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**Shaw E & I Inc**

**Sample ID: 39SC21**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 023 | **Work Order #....:** | LCXPJ1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/19/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.1 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.14 | pg/g |
| Total TCDD | ND | | 1.2 | 0.14 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 6.0 | 0.23 | pg/g |
| Total PeCDD | ND | | 6.0 | 0.23 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.27** | **J Q** J | **6.0** | **0.13** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.20** | **J Q B** J | **6.0** | **0.099** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.66** | **J** J | **6.0** | **0.10** | **pg/g** |
| **Total HxCDD** | **2.9** | | **6.0** | **0.11** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **27** | **B** | **6.0** | **0.47** | **pg/g** |
| **Total HpCDD** | **51** | | **6.0** | **0.47** | **pg/g** |
| **OCDD** | **2500** | **B** | **12** | **2.3** | **pg/g** |
| 2,3,7,8-TCDF | ND | | 1.2 | 0.40 | pg/g |
| Total TCDF | ND | | 1.2 | 0.40 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 6.0 | 0.14 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 6.0 | 0.15 | pg/g |
| **Total PeCDF** | **0.65** | B | **6.0** | **0.15** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.75** | **J B** B | **6.0** | **0.082** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.35** | **J B** J | **6.0** | **0.067** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.31** | **J** J | **6.0** | **0.074** | **pg/g** |
| **1,2,3,7,8,9-HxCDF** | **0.18** | **J Q B** B | **6.0** | **0.088** | **pg/g** |
| **Total HxCDF** | **2.5** | B | **6.0** | **0.077** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.91** | **J B** J | **6.0** | **0.073** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **0.12** | **J Q B** B | **6.0** | **0.093** | **pg/g** |
| **Total HpCDF** | **1.3** | | **6.0** | **0.082** | **pg/g** |
| **OCDF** | **0.50** | **J Q B** B | **12** | **0.18** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39SC21**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 023 | **Work Order #....:** | LCXPJ1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/19/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.1 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 89 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 80 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 94 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 75 | 40 - 135 |
| 13C-OCDD | 80 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 83 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 78 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 82 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 71 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39SC22**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 024 | **Work Order #....:** | LCXPK1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/19/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.08 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.16 | pg/g |
| Total TCDD | ND | | 1.2 | 0.16 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 6.0 | 0.26 | pg/g |
| Total PeCDD | ND | | 6.0 | 0.26 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.22** | **J** J | **6.0** | **0.13** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.20** | **J Q B** J | **6.0** | **0.10** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.64** | **J** J | **6.0** | **0.10** | **pg/g** |
| **Total HxCDD** | **3.2** | | **6.0** | **0.11** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **94** | **B** | **6.0** | **0.72** | **pg/g** |
| **Total HpCDD** | **160** | | **6.0** | **0.72** | **pg/g** |
| **OCDD** | **8800** | **E B** R | **12** | **5.8** | **pg/g** |
| 2,3,7,8-TCDF | ND | | 1.2 | 0.40 | pg/g |
| Total TCDF | ND | | 1.2 | 0.40 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 6.0 | 0.096 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 6.0 | 0.10 | pg/g |
| **Total PeCDF** | **0.11** | B | **6.0** | **0.10** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.31** | **J B** B | **6.0** | **0.056** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.096** | **J B** B | **6.0** | **0.046** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.082** | **J Q** J | **6.0** | **0.050** | **pg/g** |
| 1,2,3,7,8,9-HxCDF | ND | | 6.0 | 0.060 | pg/g |
| **Total HxCDF** | **0.91** | B | **6.0** | **0.052** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.19** | **J Q B** B | **6.0** | **0.087** | **pg/g** |
| 1,2,3,4,7,8,9-HpCDF | ND | | 6.0 | 0.11 | pg/g |
| **Total HpCDF** | **0.40** | B | **6.0** | **0.098** | **pg/g** |
| **OCDF** | **1.2** | **J B** J | **12** | **0.17** | **pg/g** |

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**Shaw E & I Inc**

**Sample ID: 39SC22**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 024 | **Work Order #....:** | LCXPK1AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/19/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.08 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 87 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 76 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 100 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 76 | 40 - 135 |
| 13C-OCDD | 84 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 82 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 76 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 83 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 73 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination The associated method blank contains the target analyte at a reportable level

E Estimated result Result concentration exceeds the calibration range

J Estimated Result

Q Estimated maximum possible concentration (EMPC).

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**Shaw E & I Inc**

**Sample ID: 39SC22**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 024 | **Work Order #....:** | LCXPK2AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/19/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.08 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | R | 6.0 | 0.64 | pg/g |
| Total TCDD | ND | | 6.0 | 0.64 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 30 | 1.7 | pg/g |
| Total PeCDD | ND | | 30 | 1.7 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 30 | 0.61 | pg/g |
| 1,2,3,6,7,8-HxCDD | ND | | 30 | 0.48 | pg/g |
| **1,2,3,7,8,9-HxCDD** | **0.66** | **J Q** | **30** | **0.48** | **pg/g** |
| **Total HxCDD** | **1.8** | | **30** | **0.51** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **120** | **B** | **30** | **2.7** | **pg/g** |
| **Total HpCDD** | **210** | | **30** | **2.7** | **pg/g** |
| **OCDD** | **9500** | **B** | **60** | **13** | **pg/g** |
| 2,3,7,8-TCDF | ND | R | 6.0 | 0.77 | pg/g |
| Total TCDF | ND | | 6.0 | 0.77 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 30 | 0.52 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 30 | 0.55 | pg/g |
| Total PeCDF | ND | | 30 | 0.55 | pg/g |
| 1,2,3,4,7,8-HxCDF | ND | | 30 | 0.27 | pg/g |
| 1,2,3,6,7,8-HxCDF | ND | | 30 | 0.22 | pg/g |
| 2,3,4,6,7,8-HxCDF | ND | | 30 | 0.25 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 30 | 0.29 | pg/g |
| **Total HxCDF** | **0.32** | | **30** | **0.26** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.53** | **J Q B** | **30** | **0.35** | **pg/g** |
| 1,2,3,4,7,8,9-HpCDF | ND | | 30 | 0.45 | pg/g |
| **Total HpCDF** | **0.53** | | **30** | **0.40** | **pg/g** |
| **OCDF** | **2.0** | **J Q B** | **60** | **1.1** | **pg/g** |

\\qsacsql1\QDSApps\SOG_Stnd\EDL_RL_Report.rpt 5/22/2009

# Form I Copy

**Shaw E & I Inc**

**Sample ID: 39SC22**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9E130208 - 024 | **Work Order #....:** | LCXPK2AA | **Matrix....:** | SO |
| **Date Sampled....:** | 05/12/09 | **Date Received....:** | 05/13/09 | **Dilution Factor:** | 5 |
| **Prep Date....:** | 05/14/09 | **Analysis Date....:** | 05/19/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9134464 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.08 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 90 | 40 - 135 |
| 13C-1,2,3,7.8-PeCDD | 82 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 116 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 64 | 40 - 135 |
| 13C-OCDD | 68 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 80 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 80 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 72 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 64 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC)

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Arsenic, Lead, and Vanadium
Test America Laboratories, Inc., SDG G9E280195

**DATE:** June 25, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for SWMU39 Removal Action on April 8, 2009, April 9, 2009, April 13, 2009, April 14, 2009, April 15, 2009, April 16, 2009, April 21, 2009, April 22, 2009, and April 23, 2009. Solid samples were analyzed for arsenic, lead, and vanadium metals using USEPA SW-846 3050B/6010B for ICP metals. Samples MMDDYYR1 (G9E280195-004) and MMDDYYR2 (G9E280195-008) are actual soil samples. A total of eight solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| 39SC23 | G9E280195-001 | 39SC26 | G9E280195-005 |
| 39SC24 | G9E280195-002 | 39TMSC03 | G9E280195-006 |
| 39SC25 | G9E280195-003 | 39SC27 | G9E280195-007 |
| MMDDYYR1 | G9E280195-004 | MMDDYYR2 | G9E280195-008 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Blank Analysis |
| | X | ICP Interference Check Sample (ICS) |
| | X | Laboratory Control Sample (LCS) |
| | X | Laboratory Sample Duplicate |
| X | | Matrix Spike and Spike Duplicate |
| | X | ICP Serial Dilution |
| | X | Field Sample Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

6/25/09
Date

**RFAAP VALIDATION REPORT**
**METALS REVIEW**
**SDG G9E280195**

## I-Holding Times and Preservation

The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: For solid matrices, the samples are shipped ambient temperature with a maximum holding time is 180 days for ICP metals.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 04/13/09, 04/28/09, 05/13/09, and 05/27/09, the coolers were received by the primary laboratory (Test America) on 05/28/09 at 4.0°C, 1.0°C, and 2.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 04/13/09, 04/28/09, 05/13/09, and 05/27/09 for select metals analysis. For solid samples, the soil samples were digested on 06/01/09 and analyzed on 06/02/09 and 06/03/09 (arsenic) for ICP metals. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Initial and Continuing Calibration

Requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

ICP: 1- blank (DoD QSM <½ MRL)
3 – standards (r≥0.995)
ICV/CCV (90-110%) (DoD QSM 90-110%)
MRL (70-130%) (DoD QSM 80-120%)
High Std. (95-105%)

- The solid samples were analyzed for ICP metals on 06/02/09 and 06/03/09 (arsenic). All ICV/CCV/High Standard/MRL criteria were met for all metals and all runs. No qualifiers were applied.

## III-Blanks

Blanks (preparation and calibration blanks) are assessed to determine the existence and magnitude of contamination problems. No contaminants should be detected (i.e. <MDL) in any of the associated blanks. DoD QSM limits are <½MRL for the method blank and <2*MDL for the calibration blanks. Samples are qualified "B" when they are less than 5x the absolute value of the maximum blank concentration. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10 for ICP) if needed. Samples MMDDYYR1 (G9E280195-004) and MMDDYYR2 (G9E280195-008) are actual soil samples.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | Analysis | QC Blank ID | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 06/02/09 | ICP Metals | ICB/CCBs | <2*MDL | NA | None |
| 06/03/09 | ICP-As | ICB/CCBs | <2*MDL | NA | None |
| 06/02/09 | ICP Metals | G9F010000-554 | <1/2*MRL | NA | None |

NA = Not Applicable
MDL = Method Detection Limit.
MRL = Method Reporting Limit.

**IV-ICP Interference Check Sample (ICS)**
The ICP interference check sample (ICS) verifies interelement and background correction factors. ICP Interference Check is performed at the beginning and end of each sample analysis run. Control limits are 80-120% (DoD QSM limits 80-120%).

- All criteria were met. No qualifiers were applied.

**V-Laboratory Control Samples (LCS)**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All aqueous LCS results must fall within the control limits. The DoD QSM solid LCS recovery limits are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9F010000-554 was used as solid LCS for ICP metals analysis on 06/02/09. All criteria were met. No qualifiers were applied. Samples 39SC23 (G9E280195-001), 39SC24 (G9E280195-002), 39SC25 (G9E280195-003), MMDDYYR1 (G9E280195-004), 39SC26 (G9E280195-005), 39TMSC03 (G9E280195-006), 39SC27 (G9E280195-007), and MMDDYYR2 (G9E280195-008) apply to this LCS.

**VI-Laboratory Duplicate Sample Analysis**
Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits. DoD QSM limits for metals are 20% RPD for ICP metals.

- No laboratory duplicate was analyzed. Laboratory precision was evaluated using the Matrix Spike and Matrix Spike Duplicate (Section VII).

**VII-Matrix Spike/Spike Duplicate**
MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Specific criteria include the analyses of matrix spike and matrix spike duplicate samples at a frequency of one MS and MSD per 20 samples of similar matrix. MS and MSD recoveries and relative percent differences between MS and MSD recoveries should be within the specified limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used. Post digestion spikes limits are 75-125% for ICP metals.

- Sample MMDDYYR1 (G9E280195-004) was used as solid laboratory MS/MSD for ICP metals analysis on 06/02/09. Arsenic (77%, 74%) was outside criteria. All other recoveries and RPD values were within criteria. The associated LCS (Section V) was within criteria. Arsenic was qualified bias low "L" for detects and "UL" for non-detects based upon the low recoveries. All other metals were within criteria. Samples 39SC23 (G9E280195-001), 39SC24 (G9E280195-002), 39SC25 (G9E280195-003), MMDDYYR1 (G9E280195-004), 39SC26 (G9E280195-005), 39TMSC03 (G9E280195-006), 39SC27 (G9E280195-007), and MMDDYYR2 (G9E280195-008) apply to this MS/MSD.

**VIII-ICP Serial Dilution**
An ICP serial dilution is performed to determine whether significant physical or chemical interferences exist due to sample matrix at high concentrations. An analysis of a 5-fold dilution should agree within 10% difference of the original result when the concentration in sample is a factor of 50 above MDL.

- The serial dilution for ICP metals was analyzed on 06/02/09 using solid sample MMDDYYR1 (G9E280195-004). Arsenic (11.1%) was outside of criteria limits. Sample concentration was <50 times MDL for arsenic; therefore, no qualifiers were applied based upon this outlier. All criteria were met. No qualifiers were applied. Samples 39SC23 (G9E280195-001), 39SC24 (G9E280195-002), 39SC25 (G9E280195-003), MMDDYYR1 (G9E280195-004), 39SC26 (G9E280195-005), 39TMSC03 (G9E280195-006), 39SC27 (G9E280195-007), and MMDDYYR2 (G9E280195-008) apply to this serial dilution.

**IX-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 35% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- Field soil sample duplicate pair 39SC26 (G9E280195-005) and 39TMSC03 (G9E280195-006) was collected for arsenic, lead, and vanadium. All detected metals found in the sample and its duplicate pair and associated %RPD are noted in **Table 3**. All criteria were met. No qualifiers were applied.

**Table 3 Field Precision Hits Analysis Summary for Select Metals for Duplicate Pair 39SC26 (G9E280195-005) and 39TMSC03 (G9E280195-006)**

| Compound | Original Sample (mg/kg) | Duplicate Pair (mg/kg) | %RPD |
|---|---|---|---|
| Arsenic | 2.4B | 2.4B | 0.0 |
| Lead | 16.3 | 14.4 | 12.4 |
| Vanadium | 32.9 | 33.9 | 3.0 |

B = Estimated value <MRL and >MDL. Data point qualified was estimated "J".

**X-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification.

**Sample: 39SC23 (G9E280195-001), Lead**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(97.45 µg/L)*(0.100 L)*(1)} / {(0.99 g)*(0.8660)} = 11.4 µg/g = 11.4 mg/kg

Reported concentration = 11.4 mg/kg
%D = 0.0%
Values were within 10% difference.

**Laboratory and Data Validation Qualifiers**

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC23

TOTAL Metals

Lot-Sample #...: G9E280195-001 Matrix.....: SO
Date Sampled...: 04/28/09 Date Received..: 05/28/09
% Moisture.....: 13

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9152554 | | | | | | |
| Arsenic | 4.3 L | 2.4 | mg/kg | SW846 6010B | 06/01-06/03/09 | LDV1A1A4 |
| | | Dilution Factor: 1 | | MDL.....: 0.81 | | |
| Lead | 11.4 | 2.3 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1A1A5 |
| | | Dilution Factor: 1 | | MDL.....: 0.69 | | |
| Vanadium | 52.2 | 1.2 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1A1A6 |
| | | Dilution Factor: 1 | | MDL.....: 0.35 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC24

TOTAL Metals

Lot-Sample #...: G9E280195-002 Matrix.....: SO
Date Sampled...: 04/28/09 Date Received..: 05/28/09
% Moisture.....: 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9152554 | | | | | | |
| Arsenic | 3.4 L | 2.5 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1H1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.85 | | |
| Lead | 10 | 2.4 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1H1AG |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Vanadium | 52.5 | 1.2 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1H1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC25

TOTAL Metals

Lot-Sample #...: G9E280195-003 Matrix.....: SO
Date Sampled...: 05/13/09 Date Received..: 05/28/09
% Moisture.....: 5.8

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9152554 | | | | | | |
| Arsenic | 1.8 B L | 2.2 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1K1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Lead | 9.1 | 2.1 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1K1AG |
| | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Vanadium | 21.4 | 1.1 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1K1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.32 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: MMDDYYR1

TOTAL Metals

Lot-Sample #...: G9E280195-004 Matrix.....: SO
Date Sampled...: 04/13/09 Date Received..: 05/28/09
% Moisture.....: 12

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9152554 | | | | | | |
| Arsenic | 3.3 L | 2.4 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1R1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.80 | | |
| Lead | 25.8 | 2.3 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1R1AG |
| | | Dilution Factor: 1 | | MDL.....: 0.68 | | |
| Vanadium | 44.3 | 1.1 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV1R1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.34 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

**Shaw E & I Inc**

**Client Sample ID: 39SC26**

**TOTAL Metals**

**Lot-Sample #...:** G9E280195-005 **Matrix.....:** SO
**Date Sampled...:** 05/27/09 **Date Received..:** 05/28/09
**% Moisture.....:** 29

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...:** 9152554 | | | | | | |
| **Arsenic** | 2.4 B L | 3.0 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV2G1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.99 | | |
| **Lead** | 16.3 | 2.8 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV2G1AG |
| | | Dilution Factor: 1 | | MDL.....: 0.84 | | |
| **Vanadium** | 32.9 | 1.4 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV2G1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.42 | | |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39TMSC03

TOTAL Metals

Lot-Sample #...: G9E280195-006 Matrix.....: SO
Date Sampled...: 05/27/09 Date Received..: 05/28/09
% Moisture.....: 27

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9152554 | | | | | | |
| Arsenic | 2.4 B L | 2.9 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV2M1AF |
| | | Dilution Factor: 1 | | MDL.....: 0.96 | | |
| Lead | 14.4 | 2.7 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV2M1AG |
| | | Dilution Factor: 1 | | MDL.....: 0.82 | | |
| Vanadium | 33.9 | 1.4 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV2M1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.41 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: 39SC27

TOTAL Metals

Lot-Sample #...: G9E280195-007 Matrix.....: SO
Date Sampled...: 05/27/09 Date Received..: 05/28/09
% Moisture.....: 33

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9152554 | | | | | | |
| Arsenic | 1.7 B L | 3.2 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV2P1AF |
| | | Dilution Factor: 1 | | MDL.....: 1.1 | | |
| Lead | 219 | 3.0 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV2P1AG |
| | | Dilution Factor: 1 | | MDL.....: 0.90 | | |
| Vanadium | 23.7 | 1.5 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV2P1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.45 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: MMDDYYR2

TOTAL Metals

Lot-Sample #...: G9E280195-008 Matrix.....: SO
Date Sampled...: 05/27/09 Date Received..: 05/28/09
% Moisture.....: 32

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9152554 | | | | | | |
| Arsenic | 1.4 B L | 3.1 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV221AF |
| | | Dilution Factor: 1 | | MDL.....: 1.0 | | |
| Lead | 202 | 2.9 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV221AG |
| | | Dilution Factor: 1 | | MDL.....: 0.88 | | |
| Vanadium | 21.3 | 1.5 | mg/kg | SW846 6010B | 06/01-06/02/09 | LDV221AH |
| | | Dilution Factor: 1 | | MDL.....: 0.44 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Appendix B-3

# XRF Field Logs

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 32.46 | 31-Mar-09 | 14:11:47 | 1 | -0.0098 | | | | |
| 66.57 | 31-Mar-09 | 14:17:56 | 2 | | Ex-situ | Si Blank | | |
| 66.41 | 31-Mar-09 | 14:23:36 | 3 | | Ex-situ | | XRF 101 | |
| 66.41 | 31-Mar-09 | 14:29:47 | 4 | | Ex-situ | | XRF 250 | |
| 65.52 | 31-Mar-09 | 14:34:53 | 5 | | Ex-situ | | XRF 408 | |
| 65.28 | 31-Mar-09 | 14:41:01 | 6 | | Ex-situ | | 39-DW15 | 0-6 |
| 66.68 | 31-Mar-09 | 15:01:19 | 7 | | Ex-situ | | 39-DW16 | 0-6 |
| 66.01 | 31-Mar-09 | 15:05:10 | 8 | | Ex-situ | | 39-DW16 ( | 0-6 |
| 67.14 | 31-Mar-09 | 15:09:54 | 9 | | Ex-situ | | 39-DW16 ( | 0-6 |
| 66.92 | 31-Mar-09 | 15:30:04 | 10 | | Ex-situ | | 39-DW17 | 0-6 |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.37921 | <LOD | 3.512588 | <LOD | 13.29723 | <LOD | 28.40003 | <LOD | 5.48436 |
| 94.10138 | 3.690567 | <LOD | 7.993557 | <LOD | 12.24693 | <LOD | 27.50402 | <LOD | 5.499125 |
| 241.4365 | 6.048769 | <LOD | 13.13075 | <LOD | 15.04195 | <LOD | 32.79752 | 10.80568 | 2.705472 |
| 503.8385 | 11.0305 | 434.5311 | 10.3431 | <LOD | 18.91711 | <LOD | 47.68277 | 16.70169 | 3.98092 |
| 14.39477 | 2.428087 | <LOD | 5.381352 | <LOD | 15.2157 | <LOD | 37.2901 | 39.517 | 3.588328 |
| 23.03559 | 2.717844 | <LOD | 5.747622 | <LOD | 15.74828 | <LOD | 38.92466 | 49.2945 | 3.911821 |
| 19.80182 | 2.585691 | <LOD | 5.512334 | <LOD | 15.10035 | <LOD | 36.48448 | 61.06316 | 4.135252 |
| 12.04238 | 2.428875 | <LOD | 5.447272 | <LOD | 15.15451 | <LOD | 37.6564 | 49.49395 | 3.937799 |
| 21.32637 | 2.63758 | <LOD | 5.564121 | <LOD | 16.19363 | <LOD | 36.9701 | 44.61716 | 3.786226 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.808776 | <LOD | 77.27892 | 232.5698 | 15.35417 | <LOD | 55.04485 | <LOD | 38.97902 |
| <LOD | 6.082788 | <LOD | 73.96007 | <LOD | 25.21667 | <LOD | 62.46275 | 88.148 | 12.96634 |
| <LOD | 7.552483 | <LOD | 74.85861 | 5435.824 | 73.78479 | <LOD | 78.60747 | <LOD | 39.35593 |
| 480.7855 | 12.41506 | <LOD | 83.52747 | 34824.16 | 333.8475 | 469.4287 | 51.23547 | 401.4506 | 15.99285 |
| <LOD | 7.337962 | <LOD | 79.74684 | 18220.24 | 177.8313 | <LOD | 88.88551 | <LOD | 40.68125 |
| <LOD | 7.192728 | <LOD | 79.08949 | 21058.93 | 203.8083 | <LOD | 90.72121 | <LOD | 41.19771 |
| <LOD | 6.588943 | <LOD | 78.93916 | 20343.13 | 195.9224 | <LOD | 86.41656 | <LOD | 40.88032 |
| <LOD | 7.424717 | <LOD | 80.25244 | 19790.49 | 195.6196 | <LOD | 97.87406 | <LOD | 41.37494 |
| <LOD | 6.68366 | <LOD | 79.24891 | 18961.83 | 186.8856 | <LOD | 94.46208 | <LOD | 40.96844 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 73.10024 | <LOD | 54.06839 | <LOD | 72.44064 | <LOD | 2.079714 | <LOD | 29.06054 |
| <LOD | 70.47887 | <LOD | 54.16176 | <LOD | 72.03522 | <LOD | 1.716226 | <LOD | 28.60443 |
| <LOD | 71.98666 | <LOD | 55.57578 | <LOD | 118.5647 | <LOD | 6.545133 | <LOD | 41.09891 |
| <LOD | 80.88641 | 329.7814 | 22.34241 | <LOD | 196.4565 | 29.77525 | 5.815244 | <LOD | 88.56164 |
| <LOD | 75.92783 | <LOD | 56.74077 | <LOD | 147.9099 | <LOD | 11.49755 | 699.4007 | 33.01854 |
| <LOD | 75.73828 | <LOD | 57.61826 | <LOD | 145.7702 | <LOD | 12.6044 | 582.9184 | 32.20526 |
| <LOD | 75.48666 | <LOD | 56.98694 | <LOD | 144.4131 | <LOD | 12.11186 | 671.3599 | 33.13307 |
| <LOD | 76.98452 | <LOD | 57.96571 | <LOD | 145.6884 | 13.31384 | 4.125709 | 664.1792 | 33.74197 |
| <LOD | 75.90217 | <LOD | 57.44629 | <LOD | 141.9603 | <LOD | 11.96718 | 499.7293 | 30.40352 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 30.60138 | 5.312948 | <LOD | 2.047269 | <LOD | 2.057039 | 5.735165 | 0.971403 | <LOD | 415.6829 |
| 36.11568 | 5.240906 | 2.427714 | 0.733164 | <LOD | 2.123207 | 3.649353 | 0.925211 | <LOD | 407.6345 |
| 48.82653 | 6.28782 | 14.42158 | 1.067391 | <LOD | 2.619289 | 134.4199 | 2.531367 | 6457.37 | 329.6707 |
| 49.58315 | 6.648675 | 22.63603 | 1.394362 | 494.8005 | 7.924847 | 231.6562 | 3.819473 | 10544.24 | 502.2554 |
| 46.71859 | 6.108103 | 50.69325 | 1.599233 | <LOD | 2.404689 | 64.09934 | 1.827078 | 7740.233 | 387.4771 |
| 42.64716 | 6.178347 | 59.59253 | 1.74797 | <LOD | 2.666287 | 66.41809 | 1.89084 | 6943.957 | 379.0927 |
| 32.72646 | 6.076619 | 59.66081 | 1.729032 | <LOD | 2.250478 | 64.81477 | 1.850915 | 6207.087 | 366.301 |
| 36.36723 | 6.224494 | 56.76308 | 1.726603 | <LOD | 2.245522 | 71.04247 | 1.961104 | 7062.766 | 381.4851 |
| 35.51055 | 6.126668 | 51.82602 | 1.642243 | <LOD | 2.311433 | 66.42425 | 1.885439 | 6622.739 | 368.9919 |

| Zr | Zr +/- |
|---|---|
| 20.03516 | 1.51933 |
| 9.0911 | 1.412765 |
| 478.2885 | 5.100155 |
| 263.7051 | 3.949451 |
| 308.6098 | 3.855659 |
| 283.2749 | 3.740694 |
| 295.9355 | 3.79336 |
| 296.925 | 3.882574 |
| 281.2092 | 3.716674 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 | Pb |
|---|---|---|---|---|---|---|---|---|---|
| 33.31 | 7-Apr-09 | 9:31:44 | 1 | -0.0298 | | | | | |
| 66.55 | 7-Apr-09 | 9:35:35 | 2 | | Ex-situ | Si Blank | | | <LOD |
| 66.17 | 7-Apr-09 | 9:41:17 | 3 | | Ex-situ | XRF 101 | | | 99.95223 |
| 65.86 | 7-Apr-09 | 9:45:29 | 4 | | Ex-situ | XRF 250 | | | 236.6561 |
| 66.08 | 7-Apr-09 | 9:48:55 | 5 | | Ex-situ | XRF 408 | | | 479.3621 |
| 67.58 | 7-Apr-09 | 9:58:53 | 6 | | Ex-situ | | RAMP 1 | 0.5ft | 56.75339 |
| 66.78 | 7-Apr-09 | 10:03:48 | 7 | | Ex-situ | | RAMP 2 | 0.5 ft | 96.3908 |
| 72.09 | 7-Apr-09 | 10:07:33 | 8 | | Ex-situ | | RAMP 3 | 0.5 ft | 70.54569 |
| 66.08 | 7-Apr-09 | 10:11:37 | 9 | | Ex-situ | | RAMP 4 | 0.5ft | 518.3324 |
| 66.88 | 7-Apr-09 | 10:15:47 | 10 | | Ex-situ | | RAMP 5 | 0-0.5 ft | 526.9367 |

| Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- | Hg |
|---|---|---|---|---|---|---|---|---|---|
| 5.269041 | <LOD | 3.357371 | <LOD | 12.50408 | <LOD | 26.32677 | <LOD | 5.778006 | <LOD |
| 3.769613 | <LOD | 8.129032 | <LOD | 13.09913 | <LOD | 27.4127 | <LOD | 5.380969 | <LOD |
| 5.880043 | <LOD | 12.68874 | <LOD | 14.88118 | <LOD | 34.18726 | 13.49071 | 2.741317 | <LOD |
| 10.91157 | 442.6785 | 10.40332 | <LOD | 18.93457 | <LOD | 49.44703 | 14.39458 | 3.94663 | 471.3338 |
| 3.58013 | <LOD | 8.183789 | <LOD | 16.9731 | <LOD | 39.8508 | 68.16914 | 4.524767 | <LOD |
| 4.220392 | <LOD | 9.273994 | <LOD | 17.39996 | <LOD | 39.68893 | 69.5097 | 4.46355 | <LOD |
| 3.722309 | <LOD | 8.149838 | <LOD | 16.55425 | <LOD | 38.64092 | 53.81318 | 4.047375 | <LOD |
| 9.411755 | <LOD | 19.44765 | 22.00087 | 6.223676 | <LOD | 40.25064 | 61.9776 | 4.309382 | <LOD |
| 9.479663 | <LOD | 19.39386 | 28.91357 | 6.267925 | <LOD | 37.60861 | 56.08087 | 4.157398 | <LOD |

| Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- | Sn |
|---|---|---|---|---|---|---|---|---|---|
| 5.796642 | <LOD | 74.89786 | 290.038 | 16.20167 | <LOD | 51.8315 | <LOD | 37.86377 | <LOD |
| 6.619583 | <LOD | 73.92653 | <LOD | 25.17537 | <LOD | 61.06808 | 77.21884 | 12.87732 | <LOD |
| 7.027463 | <LOD | 74.6658 | 5217.587 | 70.63356 | <LOD | 77.83182 | <LOD | 38.87589 | <LOD |
| 12.4062 | 92.52528 | 28.03198 | 35425.02 | 342.1625 | 494.7042 | 52.91291 | 378.9999 | 16.09712 | <LOD |
| 7.324493 | <LOD | 82.89191 | 22390.1 | 221.7426 | <LOD | 105.2628 | <LOD | 42.81445 | <LOD |
| 7.299065 | <LOD | 81.32806 | 22665.09 | 218.7459 | <LOD | 98.73204 | <LOD | 41.61282 | <LOD |
| 7.128797 | <LOD | 80.59013 | 20320.87 | 198.5636 | <LOD | 87.55237 | <LOD | 41.21945 | <LOD |
| 7.606517 | <LOD | 80.97548 | 24233.21 | 229.8212 | <LOD | 96.88687 | <LOD | 41.44257 | <LOD |
| 8.209307 | <LOD | 79.00742 | 19062.33 | 188.6109 | <LOD | 89.48647 | <LOD | 41.11019 | <LOD |

| Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- | Mo |
|---|---|---|---|---|---|---|---|---|---|
| 71.40141 | <LOD | 52.75784 | <LOD | 68.96861 | <LOD | 1.911555 | <LOD | 29.19045 | 22.2635 |
| 70.96036 | <LOD | 53.9039 | <LOD | 63.80737 | <LOD | 1.695022 | <LOD | 30.76998 | 26.28713 |
| 71.56055 | <LOD | 54.58658 | <LOD | 114.8492 | <LOD | 6.154638 | <LOD | 41.81937 | 37.02425 |
| 81.06395 | 336.3816 | 22.5873 | <LOD | 207.3772 | 25.09586 | 5.888221 | <LOD | 90.45078 | 45.4802 |
| 79.56985 | <LOD | 59.68584 | <LOD | 156.6064 | <LOD | 13.38155 | 717.4102 | 36.07429 | 39.05191 |
| 77.62688 | <LOD | 58.29881 | <LOD | 153.4902 | 14.81927 | 4.410971 | 636.386 | 33.91369 | 24.08253 |
| 76.92731 | <LOD | 57.90155 | <LOD | 146.9153 | 15.37279 | 4.160895 | 611.7625 | 32.60052 | 24.65134 |
| 77.24307 | <LOD | 57.99593 | <LOD | 149.1027 | <LOD | 13.55603 | 364.1452 | 29.34784 | 31.70554 |
| 75.56469 | <LOD | 57.82183 | <LOD | 144.083 | 12.26075 | 4.025172 | 280.5034 | 26.4839 | 27.4388 |

| Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- | Zr |
|---|---|---|---|---|---|---|---|---|---|
| 5.16424 | <LOD | 2.033435 | <LOD | 1.994871 | 7.000015 | 0.970806 | <LOD | 408.2739 | 23.02713 |
| 5.173446 | <LOD | 2.13875 | <LOD | 2.114251 | <LOD | 2.656872 | <LOD | 365.9778 | 9.586913 |
| 6.089849 | 13.57666 | 1.031608 | <LOD | 2.448436 | 126.5989 | 2.412421 | 4880.984 | 300.6054 | 454.3682 |
| 6.719467 | 26.50239 | 1.470426 | 504.7691 | 8.096801 | 230.9621 | 3.848628 | 10221.34 | 515.5767 | 281.3224 |
| 6.47641 | 60.32307 | 1.821983 | <LOD | 2.546766 | 77.41291 | 2.087209 | 6332.886 | 391.7281 | 348.1072 |
| 6.157674 | 52.4413 | 1.677627 | <LOD | 2.59918 | 78.89577 | 2.05429 | 6257.559 | 382.8032 | 284.7221 |
| 6.168547 | 55.46879 | 1.701376 | <LOD | 2.515192 | 68.40271 | 1.91985 | 5830.009 | 367.1078 | 322.7289 |
| 6.142776 | 55.16566 | 1.725712 | <LOD | 2.97755 | 71.33769 | 1.96734 | 6501.149 | 379.4127 | 267.6612 |
| 6.137426 | 55.35516 | 1.724611 | <LOD | 3.244832 | 76.40355 | 2.02067 | 5798.703 | 362.6113 | 287.0222 |

| Zr +/- |
| --- |
| 1.510363 |
| 1.408413 |
| 4.833248 |
| 4.130213 |
| 4.391557 |
| 3.798968 |
| 4.055838 |
| 3.647999 |
| 3.791753 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 | Pb |
|---|---|---|---|---|---|---|---|---|---|
| 32.52 | 8-Apr-09 | 13:20:27 | 1 | -0.0101 | | | | | |
| 66.02 | 8-Apr-09 | 13:23:24 | 2 | | Ex-situ | Si Blank | | 0-1 ft | <LOD |
| 65.61 | 8-Apr-09 | 13:27:29 | 3 | | Ex-situ | XRF 101 | | | 92.75449 |
| 66.83 | 8-Apr-09 | 13:31:15 | 4 | | Ex-situ | XRF 250 | | | 240.6364 |
| 65.41 | 8-Apr-09 | 13:33:58 | 5 | | Ex-situ | XRF 408 | | | 489.4439 |
| 67.34 | 8-Apr-09 | 13:42:30 | 6 | | Ex-situ | | NE 1 | 0 - 0.5 ft | 93.18143 |
| 67.52 | 8-Apr-09 | 13:46:56 | 7 | | Ex-situ | | NE 2 | 0 - .5Ft | 78.01354 |
| 66.12 | 8-Apr-09 | 13:50:55 | 8 | | Ex-situ | | NE 3 | 0-0.5 ft | 364.8485 |
| 65.85 | 8-Apr-09 | 13:53:46 | 9 | | Ex-situ | | NE 3 (R2) | 0-0.5 ft | 360.1924 |
| 66.36 | 8-Apr-09 | 13:57:59 | 10 | | Ex-situ | | NE 3 (R3) | 0-0.5 ft | 390.5592 |
| 69.4 | 8-Apr-09 | 14:03:27 | 11 | | Ex-situ | | NE 4 | 0-0.5 ft | 96.83952 |
| 67.8 | 8-Apr-09 | 14:07:57 | 12 | | Ex-situ | | NE 5 | 0-0.5 ft | 230.3073 |
| 66.73 | 8-Apr-09 | 14:11:53 | 13 | | Ex-situ | | NE 6 | 0-0.5 ft | 124.9663 |
| 67.09 | 8-Apr-09 | 14:15:10 | 14 | | Ex-situ | | NE 7 | 0-0.5 ft | 205.2343 |
| 65.64 | 8-Apr-09 | 14:19:48 | 15 | | Ex-situ | | NSP-FL-001 | 0-1 ft | 2063.228 |
| 65.95 | 8-Apr-09 | 14:22:35 | 16 | | Ex-situ | | NE 8 (R2) | 0-0.5 ft | 2126.211 |
| 66.77 | 8-Apr-09 | 14:27:44 | 17 | | Ex-situ | | NE 8 (R3) | 0-0.5 ft | 2497.489 |
| 67.18 | 8-Apr-09 | 14:32:21 | 18 | | Ex-situ | | NE 9 | 0-0.5 ft | 211.5562 |
| 65.82 | 8-Apr-09 | 14:35:52 | 19 | | Ex-situ | | NE 10 | 0-0.5 ft | 86.85015 |
| 66.06 | 8-Apr-09 | 14:38:57 | 20 | | Ex-situ | | NE 11 | 0-0.5 ft | 36.37911 |
| 65.4 | 8-Apr-09 | 14:42:33 | 21 | | Ex-situ | | NE 12 | 0-0.5 ft | 46.9987 |
| 67.29 | 8-Apr-09 | 14:45:37 | 22 | | Ex-situ | | NE 13 | 0-0.5 ft | 34.98448 |
| 67.72 | 8-Apr-09 | 14:49:33 | 23 | | Ex-situ | | NE 14 | 0-0.5 ft | 50.5783 |
| 65.59 | 8-Apr-09 | 14:53:00 | 24 | | Ex-situ | | NE 15 | 0-0.5 ft | 229.217 |
| 67.37 | 8-Apr-09 | 14:56:13 | 25 | | Ex-situ | | NE 16 | 0-0.5 ft | 49.24434 |
| 66.68 | 8-Apr-09 | 15:00:22 | 26 | | Ex-situ | | NE 17 | 0-0.5 ft | 122.2084 |
| 65.94 | 8-Apr-09 | 15:04:34 | 27 | | Ex-situ | | NE 18 | 0-0.5 ft | 200.4896 |
| 65.2 | 8-Apr-09 | 15:09:23 | 28 | | Ex-situ | | CA 1 | 0-0.5 ft | 170.1712 |
| 67.39 | 8-Apr-09 | 15:13:57 | 29 | | Ex-situ | | C 2 | 0-0.5 ft | 195.531 |
| 66.81 | 8-Apr-09 | 15:17:43 | 30 | | Ex-situ | | C 3 | 0-0.5 ft | 107.2828 |
| 66.65 | 8-Apr-09 | 15:21:42 | 31 | | Ex-situ | | C 4 | 0-0.5 ft | 180.1643 |
| 68.07 | 8-Apr-09 | 15:26:05 | 32 | | Ex-situ | | C 5 | 0-0.5 ft | 21.55195 |
| 67.17 | 8-Apr-09 | 15:30:49 | 33 | | Ex-situ | | CA 6 | 0-0.5 ft | 29.40278 |
| 66.51 | 8-Apr-09 | 15:35:12 | 34 | | Ex-situ | | CA 7 | 0-0.5 ft | 48.63537 |
| 64.55 | 8-Apr-09 | 15:38:12 | 35 | | Ex-situ | | CA 8 | 0-0.5 ft | 337.4788 |
| 67.4 | 8-Apr-09 | 15:41:21 | 36 | | Ex-situ | | CA 8 (R2) | 0-0.5 ft | 325.0409 |
| 66.3 | 8-Apr-09 | 15:44:15 | 37 | | Ex-situ | | CA 8 (R3) | 0-0.5 ft | 359.1915 |
| 63.7 | 8-Apr-09 | 15:47:06 | 38 | | Ex-situ | | CA 9 | 0-0.5 ft | 1502.287 |
| 65.67 | 8-Apr-09 | 15:50:33 | 39 | | Ex-situ | | CA 10 | 0-0.5 ft | 268.9156 |
| 65.55 | 8-Apr-09 | 15:54:55 | 40 | | Ex-situ | | CA 11 | 0-0.5 ft | 798.3084 |
| 68.03 | 8-Apr-09 | 15:58:50 | 41 | | Ex-situ | Si Blank | | 0-1 ft | <LOD |
| 68.69 | 8-Apr-09 | 16:01:46 | 42 | | Ex-situ | | NSP-FL-001 | 0-1 ft | 259.4099 |

| Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- | Hg |
|---|---|---|---|---|---|---|---|---|---|
| 5.181138 | <LOD | 3.365758 | <LOD | 13.14709 | <LOD | 28.32552 | <LOD | 5.856434 | <LOD |
| 3.682318 | <LOD | 8.012072 | <LOD | 12.873 | <LOD | 27.79353 | <LOD | 5.595179 | <LOD |
| 5.966105 | <LOD | 12.74288 | <LOD | 14.9099 | <LOD | 33.05805 | <LOD | 7.665211 | <LOD |
| 10.89605 | 426.4972 | 10.22187 | <LOD | 18.94657 | <LOD | 49.10007 | 13.04858 | 3.902925 | 505.3232 |
| 4.090983 | 11.51646 | 3.156286 | 77.84386 | 7.194698 | <LOD | 38.40966 | 244.3991 | 7.489063 | <LOD |
| 3.834074 | 10.29137 | 2.958107 | 71.50554 | 7.102253 | <LOD | 38.7693 | 244.1486 | 7.497156 | <LOD |
| 7.759779 | 38.01073 | 5.761792 | 1829.545 | 26.56475 | <LOD | 39.11381 | 977.3705 | 16.3129 | <LOD |
| 7.784416 | 40.14707 | 5.805415 | 1933.674 | 27.77503 | <LOD | 40.51392 | 967.0967 | 16.41097 | <LOD |
| 8.065945 | 41.76119 | 5.972133 | 714.4892 | 15.81777 | <LOD | 39.02799 | 1237.369 | 18.44073 | <LOD |
| 4.220042 | <LOD | 9.416201 | <LOD | 17.6547 | <LOD | 34.9812 | 115.4871 | 5.43805 | <LOD |
| 6.212764 | <LOD | 13.44583 | 18.66178 | 6.151518 | <LOD | 39.54842 | 108.9414 | 5.325338 | <LOD |
| 4.646958 | <LOD | 10.38171 | 46.68974 | 6.650729 | <LOD | 39.07695 | 202.8793 | 6.879413 | <LOD |
| 5.581398 | <LOD | 12.35911 | 51.35558 | 6.410222 | <LOD | 35.08021 | 179.5819 | 6.272673 | <LOD |
| 23.3974 | <LOD | 38.95916 | 130.9443 | 8.469878 | <LOD | 40.31139 | 542.5503 | 11.5275 | <LOD |
| 24.11897 | <LOD | 39.56831 | 141.0887 | 8.705216 | <LOD | 40.06491 | 518.6973 | 11.35031 | <LOD |
| 27.47373 | <LOD | 42.90073 | 150.3551 | 8.931403 | <LOD | 39.62619 | 487.8182 | 11.09408 | <LOD |
| 6.005093 | 14.53546 | 4.490286 | <LOD | 18.50229 | <LOD | 39.38072 | 121.7052 | 5.603942 | <LOD |
| 3.784147 | <LOD | 8.564833 | 28.67747 | 5.891942 | <LOD | 34.60667 | 70.9683 | 4.254287 | <LOD |
| 3.010178 | <LOD | 6.695787 | <LOD | 16.87077 | <LOD | 38.8555 | 51.10172 | 3.974592 | <LOD |
| 2.97689 | <LOD | 6.650768 | <LOD | 15.23028 | <LOD | 32.49657 | 20.57194 | 2.913078 | <LOD |
| 3.029661 | <LOD | 6.728031 | <LOD | 17.75085 | <LOD | 38.01875 | 48.02445 | 3.969987 | <LOD |
| 3.350443 | <LOD | 7.420368 | <LOD | 16.78723 | <LOD | 37.07932 | 51.95147 | 4.036091 | <LOD |
| 5.874895 | <LOD | 12.91669 | <LOD | 15.42625 | <LOD | 34.05042 | 63.37645 | 4.09866 | <LOD |
| 3.43054 | 8.87973 | 2.659232 | <LOD | 17.37504 | <LOD | 41.6094 | 72.15965 | 4.631368 | <LOD |
| 4.595402 | <LOD | 10.44001 | 45.43532 | 6.626022 | <LOD | 39.29522 | 209.3119 | 6.973466 | <LOD |
| 5.501484 | <LOD | 12.20717 | 80.94165 | 6.994724 | <LOD | 36.51194 | 439.4519 | 9.676277 | <LOD |
| 5.109012 | 16.05642 | 3.889146 | 138.2626 | 7.97735 | <LOD | 36.64889 | 440.9755 | 9.737032 | <LOD |
| 5.622747 | 20.03129 | 4.281447 | 166.3862 | 8.680691 | <LOD | 36.58708 | 525.1032 | 11.03297 | <LOD |
| 4.224664 | <LOD | 9.453929 | <LOD | 17.10618 | <LOD | 35.64148 | 196.0442 | 6.559366 | <LOD |
| 5.300412 | <LOD | 11.80559 | 34.43593 | 6.170815 | <LOD | 35.79874 | 280.0424 | 7.781438 | <LOD |
| 2.353767 | <LOD | 5.126623 | <LOD | 14.18025 | <LOD | 28.57644 | 50.97005 | 3.652708 | <LOD |
| 2.712367 | <LOD | 6.03047 | <LOD | 15.60682 | <LOD | 35.27136 | 69.4517 | 4.258943 | <LOD |
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| 7.049315 | <LOD | 15.28381 | 260.9025 | 9.708844 | <LOD | 35.13059 | 1359.724 | 18.40674 | <LOD |
| 7.197469 | 24.90438 | 5.313059 | 295.4254 | 10.5992 | <LOD | 37.27184 | 1530.575 | 20.67339 | <LOD |
| 7.394257 | <LOD | 15.79112 | 293.6946 | 10.27306 | <LOD | 34.91557 | 1160.223 | 16.93746 | <LOD |
| 20.11032 | 43.06139 | 12.04386 | 1532.778 | 26.51823 | 142.5428 | 21.89313 | 5111.524 | 55.2644 | <LOD |
| 5.978125 | <LOD | 12.93835 | 118.2477 | 7.088799 | <LOD | 28.72784 | 491.5599 | 9.715365 | <LOD |
| 11.80513 | <LOD | 23.0718 | 103.1723 | 7.444494 | <LOD | 34.02027 | 377.3932 | 9.089906 | <LOD |
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| 6.348557 | <LOD | 13.61133 | <LOD | 15.63248 | <LOD | 32.22436 | 8.641878 | 2.659789 | <LOD |

| Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- | Sn |
|---|---|---|---|---|---|---|---|---|---|
| 6.179117 | <LOD | 75.70297 | 305.9119 | 16.63262 | <LOD | 51.16299 | <LOD | 38.44067 | <LOD |
| 6.38091 | <LOD | 73.72131 | <LOD | 25.93196 | <LOD | 63.13728 | 101.8127 | 12.92208 | <LOD |
| 7.630449 | <LOD | 73.16797 | 5404.348 | 72.70411 | <LOD | 78.43385 | <LOD | 38.58065 | <LOD |
| 12.72168 | <LOD | 83.09335 | 34560.34 | 331.4011 | 389.8644 | 49.73026 | 381.4242 | 16.04758 | <LOD |
| 6.826632 | <LOD | 79.36108 | 21522.54 | 207.4229 | <LOD | 90.3121 | <LOD | 41.09116 | <LOD |
| 7.224565 | <LOD | 79.22144 | 23316.78 | 221.9559 | <LOD | 95.8742 | <LOD | 40.68832 | <LOD |
| 7.830432 | <LOD | 78.18144 | 23438.3 | 223.5879 | <LOD | 108.6374 | <LOD | 40.44659 | <LOD |
| 8.61025 | <LOD | 79.19026 | 23701.75 | 227.9321 | 111.9768 | 37.09181 | <LOD | 41.31416 | <LOD |
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| 7.460116 | <LOD | 80.24298 | 16536.62 | 171.5111 | <LOD | 81.40102 | <LOD | 41.50336 | <LOD |
| 7.947729 | <LOD | 80.83637 | 22993.79 | 222.7471 | <LOD | 91.2486 | <LOD | 41.90392 | <LOD |
| 7.454967 | <LOD | 79.49512 | 23841.37 | 226.3108 | <LOD | 93.72224 | <LOD | 41.22566 | <LOD |
| 6.958167 | <LOD | 75.00765 | 14782.42 | 149.2151 | <LOD | 77.58192 | <LOD | 39.39177 | <LOD |
| 11.62796 | <LOD | 79.72209 | 21042.83 | 208.2598 | <LOD | 100.5797 | <LOD | 41.53112 | <LOD |
| 11.67354 | <LOD | 81.14162 | 21744.85 | 215.6662 | <LOD | 102.0859 | <LOD | 42.31963 | <LOD |
| 11.5623 | <LOD | 79.93468 | 19354.43 | 198.1801 | <LOD | 100.4731 | <LOD | 42.15759 | <LOD |
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| 5.832109 | <LOD | 76.28346 | 12763.63 | 129.7001 | <LOD | 74.62356 | <LOD | 38.96364 | <LOD |
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| 7.053479 | <LOD | 80.26254 | 20974.03 | 205.7448 | <LOD | 91.06386 | <LOD | 41.4862 | <LOD |
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| 7.061393 | <LOD | 79.43288 | 26432.54 | 246.5116 | <LOD | 100.3769 | <LOD | 41.2506 | <LOD |
| 7.355854 | <LOD | 74.85859 | 19394.82 | 183.8739 | <LOD | 85.09798 | <LOD | 39.34491 | <LOD |
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| 13.6302 | <LOD | 86.58118 | 52811.46 | 496.1562 | 454.4335 | 57.89555 | <LOD | 44.93018 | <LOD |
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| Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- | Mo |
|---|---|---|---|---|---|---|---|---|---|
| 72.01025 | <LOD | 53.33089 | <LOD | 68.67378 | <LOD | 2.027525 | <LOD | 28.0655 | 18.74305 |
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| 75.98061 | <LOD | 57.59904 | <LOD | 126.0324 | 22.94033 | 4.315951 | 176.0862 | 24.69335 | 48.83107 |
| 75.3908 | <LOD | 57.52969 | <LOD | 128.566 | 17.72157 | 4.448982 | 178.1225 | 25.33244 | 44.90466 |
| 75.00641 | <LOD | 57.63633 | <LOD | 137.608 | 22.98094 | 4.519629 | 225.3793 | 27.07532 | 46.91101 |
| 76.41476 | <LOD | 58.23335 | <LOD | 138.3286 | 14.45845 | 4.531358 | 292.1186 | 28.726 | 49.06213 |
| 75.76002 | <LOD | 57.97278 | <LOD | 140.9845 | <LOD | 13.24701 | 266.3699 | 27.8166 | 46.88432 |
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| 77.58771 | <LOD | 58.65861 | <LOD | 139.217 | 17.42224 | 4.483592 | 232.3371 | 26.67304 | 29.1773 |
| 75.80634 | <LOD | 57.81153 | <LOD | 138.2308 | 22.51352 | 4.532774 | 203.9103 | 26.00222 | 52.78146 |
| 72.37073 | <LOD | 55.56479 | <LOD | 117.1498 | 12.3736 | 3.461566 | 378.7015 | 26.23571 | 42.11304 |
| 76.82427 | <LOD | 58.48296 | <LOD | 139.978 | 15.1136 | 4.322055 | 296.5324 | 28.24818 | 37.58863 |
| 78.07132 | <LOD | 59.38817 | <LOD | 141.3518 | 14.65214 | 4.419518 | 286.3164 | 28.45123 | 44.90874 |
| 77.14935 | <LOD | 59.65914 | <LOD | 139.6656 | <LOD | 12.6106 | 246.2801 | 27.36472 | 35.70549 |
| 77.74123 | <LOD | 58.89724 | <LOD | 155.6252 | 20.9582 | 4.76192 | 492.1448 | 32.41362 | 37.80074 |
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| 84.70219 | <LOD | 64.50289 | <LOD | 221.7223 | 39.27452 | 7.322198 | 1347.441 | 54.34105 | 52.99204 |
| 69.2493 | <LOD | 52.5099 | <LOD | 93.77404 | <LOD | 5.760936 | 119.6257 | 17.1574 | 37.2422 |
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| 68.80055 | <LOD | 56.07513 | <LOD | 118.6157 | <LOD | 6.593547 | <LOD | 42.21083 | 67.60183 |

| Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- | Zr |
|---|---|---|---|---|---|---|---|---|---|
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| 6.58746 | 26.55948 | 1.458458 | 501.1099 | 7.981072 | 237.2269 | 3.871746 | 9818.208 | 498.2016 | 271.5996 |
| 5.948355 | 50.62391 | 1.628225 | <LOD | 2.476555 | 51.93383 | 1.714439 | 3108.447 | 299.9707 | 107.0834 |
| 5.919601 | 52.68213 | 1.65713 | <LOD | 2.55338 | 40.0263 | 1.568692 | 2566.633 | 295.8002 | 93.69224 |
| 5.99744 | 38.56115 | 1.487535 | <LOD | 3.041168 | 81.04502 | 2.06676 | 3125.727 | 317.2589 | 117.221 |
| 6.078413 | 42.61533 | 1.561037 | <LOD | 3.002483 | 85.36539 | 2.136548 | 3198.284 | 320.5097 | 123.0905 |
| 6.043073 | 38.97375 | 1.49906 | <LOD | 3.10237 | 84.68575 | 2.113398 | 2972.714 | 320.1968 | 139.2217 |
| 6.080828 | 31.37605 | 1.386166 | <LOD | 2.479127 | 123.8259 | 2.54876 | 1700.077 | 272.748 | 88.5386 |
| 6.003551 | 47.28394 | 1.618061 | <LOD | 2.866747 | 44.64588 | 1.658165 | 2753.956 | 316.5984 | 140.822 |
| 6.124693 | 57.28601 | 1.725792 | <LOD | 2.585375 | 45.85605 | 1.65038 | 4147.82 | 333.1718 | 197.0011 |
| 5.742894 | 64.8538 | 1.759305 | <LOD | 2.534707 | 42.82648 | 1.554283 | 3347.988 | 286.1334 | 120.0382 |
| 6.123431 | 40.05025 | 1.632887 | <LOD | 4.952621 | 75.13259 | 2.076117 | 3936.605 | 334.5575 | 145.5006 |
| 6.215955 | 43.75087 | 1.700422 | <LOD | 5.058349 | 78.81052 | 2.136008 | 3863.619 | 336.7061 | 147.4169 |
| 6.221047 | 41.30787 | 1.701763 | <LOD | 5.381145 | 71.32334 | 2.077872 | 3603.488 | 331.2179 | 138.6166 |
| 6.285653 | 48.10987 | 1.642805 | <LOD | 2.699574 | 69.38062 | 1.970708 | 6621.677 | 392.5629 | 275.9929 |
| 5.582084 | 22.59079 | 1.156228 | <LOD | 2.293384 | 26.67738 | 1.32287 | 3230.437 | 282.6957 | 111.1899 |
| 6.056641 | 66.20467 | 1.826211 | <LOD | 2.319903 | 43.27124 | 1.608994 | 5750.776 | 364.5836 | 218.1447 |
| 5.534293 | 22.14014 | 1.125563 | <LOD | 2.096766 | 19.59768 | 1.202042 | 2570.547 | 264.5598 | 118.5554 |
| 6.20705 | 83.3773 | 2.069769 | <LOD | 2.310977 | 64.65652 | 1.901155 | 6222.571 | 384.2348 | 251.4754 |
| 6.147017 | 66.72379 | 1.859911 | <LOD | 2.385443 | 46.85299 | 1.67864 | 5573.34 | 362.0396 | 230.4649 |
| 5.970339 | 44.00396 | 1.496071 | <LOD | 2.338005 | 54.25324 | 1.691054 | 5086.454 | 326.4986 | 301.5629 |
| 6.378336 | 48.88304 | 1.664196 | <LOD | 2.572016 | 56.82549 | 1.840889 | 8036.715 | 413.5316 | 271.8518 |
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| 5.674449 | 49.46844 | 1.560591 | <LOD | 2.484481 | 50.68305 | 1.6413 | 1787.58 | 275.9633 | 93.26827 |
| 5.754472 | 50.12683 | 1.572246 | <LOD | 2.224736 | 52.18309 | 1.662723 | 3413.596 | 312.8088 | 159.0435 |
| 5.919913 | 35.97751 | 1.429837 | <LOD | 2.614528 | 110.8643 | 2.363078 | 2507.493 | 280.8717 | 99.02647 |
| 5.772433 | 46.48565 | 1.533864 | <LOD | 2.536146 | 29.84583 | 1.395882 | 2983.963 | 284.2968 | 94.24209 |
| 5.794793 | 43.16804 | 1.493937 | <LOD | 2.638466 | 31.78929 | 1.426639 | 3099.234 | 291.425 | 148.0004 |
| 5.500619 | 9.545916 | 0.898874 | <LOD | 1.871387 | 12.24081 | 1.08984 | 922.5274 | 192.8936 | 95.90817 |
| 5.746706 | 25.84732 | 1.226355 | <LOD | 2.241879 | 23.31294 | 1.300715 | 3356.3 | 297.222 | 118.0523 |
| 5.791372 | 16.29064 | 1.069089 | <LOD | 2.257248 | 15.9106 | 1.195321 | 3279.742 | 300.9374 | 157.514 |
| 5.611012 | 14.3089 | 1.030971 | <LOD | 2.70949 | 33.82225 | 1.416711 | 3163.664 | 286.8268 | 69.22032 |
| 5.917221 | 14.65428 | 1.083064 | <LOD | 2.903903 | 57.3078 | 1.769391 | 3426.836 | 311.7755 | 94.48132 |
| 5.728323 | 13.88836 | 1.041439 | <LOD | 2.700032 | 35.89922 | 1.467194 | 3495.744 | 291.5713 | 89.56415 |
| 6.588772 | 16.84289 | 1.364831 | <LOD | 4.910712 | 137.9153 | 2.935292 | 8512.117 | 523.754 | 71.60492 |
| 5.320651 | 5.311957 | 0.811244 | <LOD | 2.422961 | 14.97917 | 1.102599 | 671.0435 | 200.6425 | 78.6853 |
| 5.792618 | 29.23968 | 1.331705 | <LOD | 3.181288 | 28.1913 | 1.395889 | 1935.816 | 255.3534 | 101.3755 |
| 5.325162 | <LOD | 2.128586 | <LOD | 2.099459 | 8.19587 | 1.00702 | <LOD | 377.5427 | 19.50387 |
| 6.4258 | 14.30098 | 1.07959 | <LOD | 2.590745 | 135.7011 | 2.578468 | 5241.399 | 315.336 | 446.6285 |

| Zr +/- |
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| 4.803338 |
| 4.012848 |
| 2.372366 |
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| 2.437884 |
| 1.932412 |
| 2.271177 |
| 1.512739 |
| 4.936763 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 | Pb |
|---|---|---|---|---|---|---|---|---|---|
| 33.3 | 9-Apr-09 | 10:14:05 | 1 | -0.0291 | | | | | |
| 66.46 | 9-Apr-09 | 10:16:26 | 2 | | Ex-situ | Si Blank | | | <LOD |
| 66.07 | 9-Apr-09 | 10:20:06 | 3 | | Ex-situ | XRF 101 | | | 94.68528 |
| 64.74 | 9-Apr-09 | 10:23:27 | 4 | | Ex-situ | XRF 250 | | | 249.6564 |
| 64.98 | 9-Apr-09 | 10:27:46 | 5 | | Ex-situ | XRF 408 | | | 451.1893 |
| 66.55 | 9-Apr-09 | 10:39:41 | 6 | | Ex-situ | | NSP-FL-1A | 0-1 ft | 20.36314 |
| 73.57 | 9-Apr-09 | 10:44:47 | 7 | | Ex-situ | | NSP-FL-1B | 0-1 ft | 46.99363 |
| 67.01 | 9-Apr-09 | 10:50:12 | 8 | | Ex-situ | | NSP_SW_1 | 0-1 ft | 16.91137 |
| 67.67 | 9-Apr-09 | 11:11:41 | 9 | | Ex-situ | | NSP-FL-1C | 0-1 ft | 9.229325 |
| 65.98 | 9-Apr-09 | 11:15:07 | 10 | | Ex-situ | | NSP_SW_2 | 0-1 ft | 15.23989 |
| 69.07 | 9-Apr-09 | 11:18:18 | 11 | | Ex-situ | | NSP-SW-3 | 0-1 ft | 9.850616 |
| 66.98 | 9-Apr-09 | 11:27:57 | 12 | | Ex-situ | | NSP-FL-1D | 0-1 ft | 66.14195 |
| 68.32 | 9-Apr-09 | 11:31:35 | 13 | | Ex-situ | | NSP-SW-4 | 0-1 ft | 11.10966 |
| 55.85 | 9-Apr-09 | 11:51:00 | 14 | | Ex-situ | | NSP-FL-1E | 0-1 ft | <LOD |
| 70.21 | 9-Apr-09 | 11:54:08 | 15 | | Ex-situ | | NSP-SW-5 | 0-1 ft | 10.11818 |
| 34.07 | 9-Apr-09 | 13:47:07 | 16 | -0.0085 | | | | | |
| 66.15 | 9-Apr-09 | 13:49:43 | 17 | | Ex-situ | Si Blank | | 0-1 ft | <LOD |
| 65.65 | 9-Apr-09 | 13:53:21 | 18 | | Ex-situ | XRF 250 | | 0-1 ft | 248.8113 |
| 67.02 | 9-Apr-09 | 14:07:32 | 19 | | Ex-situ | | NSP-FL-1F | 0-1 ft | 131.2586 |
| 67.8 | 9-Apr-09 | 14:11:15 | 20 | | Ex-situ | | NSP-SW-6 | 0-1 ft | 153.2421 |
| 67.4 | 9-Apr-09 | 14:14:26 | 21 | | Ex-situ | | NSP-SW-6 ( | 0-1 ft | 101.0367 |
| 67.45 | 9-Apr-09 | 14:17:53 | 22 | | Ex-situ | | NSP-SW-6 ( | 0-1 ft | 97.24376 |
| 66.99 | 9-Apr-09 | 14:29:36 | 23 | | Ex-situ | | NSP-FL-1G | 0-1 ft | 116.048 |
| 67.59 | 9-Apr-09 | 14:32:35 | 24 | | Ex-situ | | NSP-SW-7 | 0-1 ft | 12.74773 |
| 67.62 | 9-Apr-09 | 14:36:57 | 25 | | Ex-situ | Si Blank | | 0-1 ft | <LOD |
| 66.64 | 9-Apr-09 | 14:40:19 | 26 | | Ex-situ | XRF 250 | | 0-1 ft | 234.5066 |

| Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- | Hg |
|---|---|---|---|---|---|---|---|---|---|
| 5.04104 | <LOD | 3.316551 | <LOD | 13.03141 | <LOD | 27.84817 | <LOD | 5.365172 | <LOD |
| 3.686335 | <LOD | 8.18574 | <LOD | 12.91611 | <LOD | 27.1683 | <LOD | 5.58279 | <LOD |
| 6.066853 | <LOD | 12.99445 | <LOD | 15.19413 | <LOD | 33.32645 | 10.10482 | 2.658123 | <LOD |
| 10.45432 | 441.7724 | 10.1361 | <LOD | 18.57657 | <LOD | 47.72204 | <LOD | 11.37514 | 491.2396 |
| 2.633017 | <LOD | 5.668005 | <LOD | 16.04273 | <LOD | 39.44602 | 38.39006 | 3.654508 | <LOD |
| 3.81438 | <LOD | 8.378744 | <LOD | 20.86306 | <LOD | 45.46111 | 53.68943 | 4.764043 | <LOD |
| 2.596402 | <LOD | 5.726147 | <LOD | 17.01601 | <LOD | 39.96994 | 33.74925 | 3.612298 | <LOD |
| 2.343187 | <LOD | 4.825379 | <LOD | 16.4403 | <LOD | 38.8176 | 32.15082 | 3.532863 | <LOD |
| 2.601433 | <LOD | 5.60769 | <LOD | 16.1887 | <LOD | 41.62407 | 53.79643 | 4.132301 | <LOD |
| 2.477873 | <LOD | 5.329229 | <LOD | 16.61991 | <LOD | 41.74554 | 39.51461 | 3.886479 | <LOD |
| 3.639155 | <LOD | 7.876525 | <LOD | 16.61121 | <LOD | 37.70963 | 32.87243 | 3.528813 | <LOD |
| 2.555967 | <LOD | 5.41116 | <LOD | 16.26707 | <LOD | 40.87078 | 40.35178 | 3.931464 | <LOD |
| 7.253966 | <LOD | 5.154169 | <LOD | 16.99931 | <LOD | 44.9113 | 41.97289 | 4.177255 | <LOD |
| 2.677049 | <LOD | 5.68266 | <LOD | 18.50361 | <LOD | 45.99358 | 42.31691 | 4.185632 | <LOD |
| | | | | | | | | | |
| 4.765808 | <LOD | 3.294733 | <LOD | 12.38073 | <LOD | 25.89658 | <LOD | 5.879162 | <LOD |
| 6.125658 | <LOD | 13.08637 | <LOD | 15.36019 | <LOD | 32.97512 | 16.98056 | 2.902023 | <LOD |
| 4.923015 | <LOD | 10.82581 | 59.17392 | 7.234604 | <LOD | 43.50781 | 65.74887 | 4.573534 | <LOD |
| 5.287844 | <LOD | 11.95379 | <LOD | 16.83845 | <LOD | 39.36657 | 46.16098 | 4.025549 | <LOD |
| 4.430371 | <LOD | 9.560215 | <LOD | 17.00519 | <LOD | 41.00541 | 41.15272 | 3.888253 | <LOD |
| 4.368363 | <LOD | 9.949118 | <LOD | 16.74668 | <LOD | 42.31431 | 49.86224 | 4.112755 | <LOD |
| 4.73331 | <LOD | 10.26951 | 103.2326 | 8.104346 | <LOD | 41.9771 | 47.52229 | 4.24221 | <LOD |
| 2.716411 | <LOD | 6.051761 | <LOD | 17.18329 | <LOD | 46.0162 | 62.41085 | 4.603434 | <LOD |
| 5.236843 | <LOD | 3.437324 | <LOD | 12.26311 | <LOD | 26.98289 | <LOD | 5.706068 | <LOD |
| 5.937642 | <LOD | 12.87857 | <LOD | 14.6654 | <LOD | 32.08263 | 9.694367 | 2.646373 | <LOD |

| Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- | Sn |
|---|---|---|---|---|---|---|---|---|---|
| 5.728597 | <LOD | 75.50176 | 292.9024 | 16.36354 | <LOD | 53.22914 | <LOD | 38.04557 | <LOD |
| 6.348392 | <LOD | 73.71299 | <LOD | 26.97199 | <LOD | 63.41793 | 81.9967 | 12.80574 | <LOD |
| 7.522297 | <LOD | 74.34953 | 5879.385 | 76.55033 | <LOD | 75.06999 | <LOD | 39.19716 | <LOD |
| 12.50198 | <LOD | 84.67316 | 34007.49 | 325.8353 | 486.6018 | 51.57916 | 418.7066 | 16.20737 | <LOD |
| 6.745768 | <LOD | 81.51784 | 24689.34 | 233.2353 | <LOD | 100.6015 | <LOD | 41.55237 | <LOD |
| 7.866093 | <LOD | 93.07352 | 26320.3 | 288.5639 | <LOD | 113.4108 | <LOD | 48.09107 | <LOD |
| 6.489166 | <LOD | 82.24062 | 27266.91 | 258.5911 | <LOD | 95.55955 | <LOD | 42.1056 | <LOD |
| 6.394608 | <LOD | 82.9915 | 23255.13 | 225.5934 | <LOD | 95.96423 | <LOD | 42.33979 | <LOD |
| 7.313979 | <LOD | 82.31478 | 31583.26 | 292.2802 | <LOD | 103.42 | <LOD | 42.21056 | <LOD |
| 6.762104 | <LOD | 85.1768 | 26362.62 | 260.9437 | <LOD | 98.10214 | <LOD | 43.67993 | <LOD |
| 7.195282 | <LOD | 81.02322 | 25076.36 | 237.1983 | <LOD | 94.62898 | <LOD | 41.50637 | <LOD |
| 7.579552 | <LOD | 84.73732 | 30708.59 | 297.7162 | <LOD | 101.9229 | <LOD | 43.56748 | <LOD |
| 6.754847 | <LOD | 90.77493 | 28014.25 | 290.168 | <LOD | 105.9402 | <LOD | 46.51574 | <LOD |
| 8.052765 | <LOD | 88.79215 | 33482.2 | 333.6205 | <LOD | 117.2502 | <LOD | 45.43167 | <LOD |
| | | | | | | | | | |
| 5.955701 | <LOD | 73.90323 | 285.8857 | 16.04817 | <LOD | 47.91178 | <LOD | 37.88597 | <LOD |
| 7.393257 | <LOD | 75.86974 | 5701.08 | 75.87475 | <LOD | 77.46663 | <LOD | 39.48392 | <LOD |
| 7.544562 | <LOD | 83.98834 | 32248.42 | 301.528 | <LOD | 105.2269 | <LOD | 42.92159 | <LOD |
| 7.361773 | <LOD | 83.64671 | 27560.74 | 265.8687 | <LOD | 99.60371 | <LOD | 43.12998 | <LOD |
| 7.225497 | <LOD | 85.51903 | 26983.04 | 260.6947 | <LOD | 101.2102 | <LOD | 43.38937 | <LOD |
| 7.423649 | <LOD | 83.92352 | 29193.94 | 278.4788 | <LOD | 98.01639 | <LOD | 43.12833 | <LOD |
| 8.215386 | <LOD | 84.27483 | 32154.75 | 304.2148 | <LOD | 114.5054 | <LOD | 43.21124 | <LOD |
| 7.6734 | <LOD | 86.56358 | 38141.84 | 364.1281 | <LOD | 113.7262 | <LOD | 44.59881 | <LOD |
| 4.907204 | <LOD | 74.38001 | 249.7533 | 15.64092 | <LOD | 55.24521 | <LOD | 38.44692 | <LOD |
| 7.483513 | <LOD | 74.27791 | 5369.219 | 72.90907 | <LOD | 75.66424 | <LOD | 38.95842 | <LOD |

| Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- | Mo |
|---|---|---|---|---|---|---|---|---|---|
| 71.97793 | <LOD | 53.31287 | <LOD | 68.56636 | <LOD | 1.950882 | <LOD | 29.70576 | 22.22167 |
| 70.55944 | <LOD | 53.8041 | <LOD | 66.80574 | <LOD | 1.653356 | <LOD | 28.6775 | 36.50167 |
| 71.75131 | <LOD | 54.8786 | <LOD | 124.6711 | <LOD | 6.502157 | <LOD | 42.56682 | 51.52992 |
| 82.40529 | 384.5288 | 22.45027 | <LOD | 199.424 | <LOD | 16.95659 | <LOD | 87.53154 | 35.86926 |
| 77.56863 | <LOD | 58.12568 | <LOD | 152.1405 | <LOD | 13.63353 | 800.67 | 36.61671 | 36.43001 |
| 88.8163 | <LOD | 67.88789 | <LOD | 169.1297 | <LOD | 16.34811 | 131.9973 | 29.3884 | 38.59134 |
| 78.48648 | <LOD | 59.02686 | <LOD | 147.9954 | <LOD | 14.47096 | 372.1019 | 30.4355 | <LOD |
| 79.10074 | <LOD | 59.18792 | <LOD | 143.0105 | <LOD | 13.33809 | 438.7931 | 30.76125 | 35.35086 |
| 78.7463 | <LOD | 58.85723 | <LOD | 158.6449 | <LOD | 15.49478 | 361.7855 | 31.26581 | 22.92483 |
| 80.83457 | <LOD | 61.30725 | <LOD | 152.1066 | <LOD | 14.71319 | 351.4035 | 30.89869 | 34.30589 |
| 77.43871 | <LOD | 58.23206 | <LOD | 149.6449 | <LOD | 13.52218 | 522.8702 | 32.22072 | 24.95708 |
| 80.99954 | <LOD | 61.25349 | <LOD | 168.9425 | <LOD | 15.96308 | 346.8632 | 31.93962 | 36.4423 |
| 86.13888 | <LOD | 64.85098 | <LOD | 165.5377 | <LOD | 15.91448 | 486.0535 | 35.81811 | 38.11039 |
| 84.84987 | <LOD | 63.81619 | <LOD | 176.4918 | 17.97479 | 5.808626 | 439.5395 | 35.74857 | 30.94247 |
| 70.69925 | <LOD | 52.54908 | <LOD | 63.07093 | <LOD | 1.923617 | <LOD | 28.72019 | 31.66277 |
| 73.28377 | <LOD | 55.64541 | <LOD | 124.2759 | <LOD | 6.522346 | <LOD | 42.92971 | 47.93525 |
| 80.09448 | <LOD | 60.00086 | <LOD | 162.4945 | <LOD | 15.85575 | 382.7229 | 32.20398 | 28.26185 |
| 80.23039 | <LOD | 60.23064 | <LOD | 155.1971 | <LOD | 14.94989 | 339.0795 | 30.56202 | 28.99341 |
| 81.22496 | <LOD | 60.58845 | <LOD | 154.2625 | <LOD | 14.7353 | 348.5655 | 30.61404 | 36.48279 |
| 80.2095 | <LOD | 60.13329 | <LOD | 152.9213 | <LOD | 15.18493 | 323.8508 | 30.47186 | 35.03161 |
| 80.217 | <LOD | 60.50424 | <LOD | 168.9936 | <LOD | 16.08532 | 282.0209 | 30.89948 | 35.67179 |
| 82.68023 | <LOD | 62.30169 | <LOD | 185.0607 | 22.42211 | 6.05654 | 456.0233 | 36.10613 | 33.66173 |
| 71.58981 | <LOD | 53.68246 | <LOD | 66.6764 | <LOD | 2.040302 | <LOD | 28.21294 | 29.33432 |
| 71.24033 | <LOD | 55.07856 | <LOD | 126.3429 | <LOD | 6.394729 | <LOD | 43.29301 | 51.86527 |

| Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- | Zr |
|---|---|---|---|---|---|---|---|---|---|
| 5.182458 | 2.239802 | 0.720148 | <LOD | 2.063505 | 7.859224 | 0.989745 | <LOD | 412.8454 | 14.50253 |
| 5.231906 | <LOD | 2.046869 | <LOD | 2.029256 | <LOD | 2.719743 | <LOD | 386.9432 | 10.77967 |
| 6.164294 | 14.84915 | 1.061445 | <LOD | 2.632624 | 148.7845 | 2.630067 | 5525.378 | 323.198 | 442.9408 |
| 6.569052 | 25.69203 | 1.435917 | 486.8188 | 7.816781 | 223.6548 | 3.730977 | 9701.249 | 495.924 | 276.4535 |
| 5.953513 | 52.91946 | 1.665606 | <LOD | 2.335847 | 78.04544 | 2.02545 | 5542.833 | 371.0828 | 138.4605 |
| 7.129644 | 49.85544 | 1.900646 | <LOD | 2.748581 | 74.40187 | 2.325232 | 4068.375 | 399.1675 | 205.0478 |
| 17.95053 | 49.47466 | 1.651452 | <LOD | 2.294719 | 71.5924 | 1.992403 | 5505.493 | 369.0145 | 142.9515 |
| 5.991833 | 40.71512 | 1.517666 | <LOD | 2.253966 | 64.62647 | 1.900318 | 4473.075 | 346.634 | 104.0255 |
| 6.135967 | 69.03642 | 1.908112 | <LOD | 2.464869 | 66.1739 | 1.930471 | 5815.981 | 387.9731 | 228.172 |
| 6.339417 | 41.62614 | 1.595087 | <LOD | 2.204228 | 52.65584 | 1.831448 | 6968.241 | 400.2094 | 163.1847 |
| 5.945308 | 46.32095 | 1.584025 | <LOD | 2.310677 | 65.61865 | 1.893436 | 5582.975 | 369.2678 | 154.592 |
| 6.399767 | 51.65543 | 1.749293 | <LOD | 2.207954 | 61.38275 | 1.950205 | 7611.338 | 432.0984 | 181.6375 |
| 6.673975 | 51.27066 | 1.837782 | <LOD | 2.692054 | 65.01402 | 2.100612 | 4679.648 | 397.5776 | 138.1975 |
| 6.707491 | 54.58938 | 1.862643 | <LOD | 2.642236 | 65.18938 | 2.078424 | 6723.456 | 438.3982 | 228.6301 |
| 5.180405 | <LOD | 2.058064 | <LOD | 2.02314 | 7.656094 | 0.976608 | <LOD | 384.3027 | 18.88336 |
| 6.220323 | 13.83498 | 1.054095 | <LOD | 2.794413 | 136.7295 | 2.545655 | 5670.662 | 326.221 | 445.4933 |
| 6.184726 | 59.8318 | 1.81941 | <LOD | 2.800562 | 79.22534 | 2.108391 | 5639.563 | 393.3489 | 188.4364 |
| 6.353055 | 55.61178 | 1.778431 | <LOD | 2.506251 | 77.21424 | 2.102964 | 5748.916 | 385.1582 | 261.2864 |
| 6.32942 | 51.79987 | 1.718983 | <LOD | 2.51228 | 68.54658 | 1.995379 | 5172.505 | 375.8495 | 230.6875 |
| 6.332756 | 52.87281 | 1.73324 | <LOD | 2.545201 | 70.73895 | 2.020917 | 6006.149 | 385.5011 | 239.0472 |
| 6.43575 | 53.63513 | 1.756634 | <LOD | 2.709022 | 67.21413 | 1.993746 | 7847.488 | 431.0661 | 278.2539 |
| 6.653199 | 60.6879 | 1.906352 | <LOD | 2.446599 | 77.41606 | 2.178723 | 7138.541 | 451.9785 | 292.0533 |
| 5.292225 | 2.330178 | 0.730774 | <LOD | 1.872087 | 6.430759 | 0.978734 | <LOD | 371.3725 | 19.43592 |
| 6.251014 | 14.09396 | 1.055222 | <LOD | 2.672076 | 128.5753 | 2.464545 | 4635.953 | 314.8395 | 459.9687 |

| Zr +/- |
| --- |
| 1.456108 |
| 1.420685 |
| 4.775862 |
| 4.032662 |
| 2.643008 |
| 3.696305 |
| 2.728092 |
| 2.404261 |
| 3.390818 |
| 2.983361 |
| 2.771159 |
| 3.150013 |
| 2.946031 |
| 3.679095 |
| |
| 1.473544 |
| 4.844225 |
| 3.127928 |
| 3.73584 |
| 3.47837 |
| 3.544775 |
| 3.880149 |
| 4.121681 |
| 1.511345 |
| 4.941616 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 31.11 | 13-Apr-09 | 8:41:18 | 1 | -0.0298 | | | | |
| 63.84 | 13-Apr-09 | 8:43:55 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 64.68 | 13-Apr-09 | 8:47:13 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 65.47 | 13-Apr-09 | 8:51:13 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 66.09 | 13-Apr-09 | 9:04:33 | 5 | | Ex-situ | | NSP-FL-1A | 0-1 ft |
| 68.9 | 13-Apr-09 | 9:08:31 | 6 | | Ex-situ | | NSP-FL-1K | 0-1 ft |
| 68.08 | 13-Apr-09 | 9:11:37 | 7 | | Ex-situ | | NSP-SW-13 | 0-1 ft |
| 66.49 | 13-Apr-09 | 9:15:54 | 8 | | Ex-situ | | NSP-FL-1J | 0-1 ft |
| 69.46 | 13-Apr-09 | 9:19:18 | 9 | | Ex-situ | | NSP-SW-15 | 0-1 ft |
| 70.68 | 13-Apr-09 | 9:22:00 | 10 | | Ex-situ | | NSP-FL-1L | 0-1 ft |
| 69.33 | 13-Apr-09 | 9:25:01 | 11 | | Ex-situ | | NSP-SW-14 | 0-1 ft |
| 66.26 | 13-Apr-09 | 9:30:35 | 12 | | Ex-situ | | NSP-SW-12 | 0-1 ft |
| 67.32 | 13-Apr-09 | 9:49:40 | 13 | | Ex-situ | | NSP-FL-1H | 0-1 ft |
| 65.48 | 13-Apr-09 | 9:53:10 | 14 | | Ex-situ | | NSP-SW-10 | 0-1 ft |
| 67.28 | 13-Apr-09 | 9:55:45 | 15 | | Ex-situ | | NSP-SW-9 | 0-1 ft |
| 66.59 | 13-Apr-09 | 9:58:49 | 16 | | Ex-situ | | NSP-SW-11 | 0-1 ft |
| 68.43 | 13-Apr-09 | 10:02:45 | 17 | | Ex-situ | | NSP-SW-8 | 0-1 ft |
| 65.29 | 13-Apr-09 | 10:05:55 | 18 | | Ex-situ | | NSP-FL-1I | 0-1 ft |
| 67.58 | 13-Apr-09 | 10:18:22 | 19 | | Ex-situ | | NSP-SW-16 | 0-1 ft |
| 67.83 | 13-Apr-09 | 10:23:13 | 20 | | Ex-situ | | NSP-SW-17 | 0-1 ft |
| 67.09 | 13-Apr-09 | 10:50:06 | 21 | | Ex-situ | | NSP-SW-18 | 0-1 ft |
| 70 | 13-Apr-09 | 10:52:56 | 22 | | Ex-situ | | NSP-SW-19 | 0-1 ft |
| 20.22 | 13-Apr-09 | 10:57:33 | 23 | | Ex-situ | | NSP-FL-2K | 0-1 ft |
| 69.81 | 13-Apr-09 | 11:00:37 | 24 | | Ex-situ | | NSP-FL-2K | 0-1 ft |
| 69.05 | 13-Apr-09 | 11:04:43 | 25 | | Ex-situ | | NSP-FL-2K | 0-1 ft |
| 69.07 | 13-Apr-09 | 11:08:38 | 26 | | Ex-situ | | NSP-FL-2K | 0-1 ft |
| 70.18 | 13-Apr-09 | 11:14:31 | 27 | | Ex-situ | | NSP-FL-2J | 0-1 ft |
| 69.76 | 13-Apr-09 | 11:27:56 | 28 | | Ex-situ | | NSP-SW-20 | 0-1 ft |
| 68.99 | 13-Apr-09 | 11:31:58 | 29 | | Ex-situ | | NSP-FL-2I | 0-1 ft |
| 34.5 | 13-Apr-09 | 13:34:56 | 30 | -0.01 | | | | |
| 69.81 | 13-Apr-09 | 13:37:28 | 31 | | Ex-situ | Si Blank | | 0-1 ft |
| 67.68 | 13-Apr-09 | 13:41:04 | 32 | | Ex-situ | XRF 250 | | 0-1 ft |
| 68.5 | 13-Apr-09 | 13:59:28 | 33 | | Ex-situ | | NSP-SW-21 | 0-1 ft |
| 67.85 | 13-Apr-09 | 14:02:27 | 34 | | Ex-situ | | NSP-FL-3I | 0-1 ft |
| 68.65 | 13-Apr-09 | 14:18:14 | 35 | | Ex-situ | | NSP-FL-2H | 0-1 ft |
| 69.08 | 13-Apr-09 | 14:21:27 | 36 | | Ex-situ | | NSP-FL-2H | 0-1 ft |
| 68.99 | 13-Apr-09 | 14:23:58 | 37 | | Ex-situ | | NSP-FL-2H | 0-1 ft |
| 69.99 | 13-Apr-09 | 14:26:55 | 38 | | Ex-situ | | NSP-SW-22 | 0-1 ft |
| 67.81 | 13-Apr-09 | 14:39:59 | 39 | | Ex-situ | | NSP-FL-3H | 0-1 ft |
| 66.64 | 13-Apr-09 | 14:42:40 | 40 | | Ex-situ | | NSP-SW-23 | 0-1 ft |
| 64.48 | 13-Apr-09 | 15:03:12 | 41 | | Ex-situ | | NSP-SW-24 | 0-1 ft |
| 64.16 | 13-Apr-09 | 15:05:55 | 42 | | Ex-situ | | NSP-FL-4G | 0-1 ft |
| 64.3 | 13-Apr-09 | 15:08:57 | 43 | | Ex-situ | | NSP-FL-3G | 0-1 ft |
| 65 | 13-Apr-09 | 15:24:54 | 44 | | Ex-situ | | NSP-SW-25 | 0-1 ft |
| 66.08 | 13-Apr-09 | 15:27:31 | 45 | | Ex-situ | | NSP-FL-4F | 0-1 ft |
| 66.56 | 13-Apr-09 | 15:30:14 | 46 | | Ex-situ | | NSP-FL-3F | 0-1 ft |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 50.14 | 13-Apr-09 | 15:33:02 | 47 | Ex-situ | | STEEL BLAN | 0-1 ft |
| 66.1 | 13-Apr-09 | 15:36:12 | 48 | Ex-situ | Si Blank | | 0-1 ft |
| 65.19 | 13-Apr-09 | 15:39:43 | 49 | Ex-situ | | NSP-FL-1A | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.002003 | <LOD | 3.447023 | <LOD | 12.85352 | <LOD | 27.87429 | <LOD | 5.732362 |
| 104.3873 | 3.784902 | <LOD | 8.240928 | <LOD | 12.46706 | <LOD | 28.33848 | <LOD | 5.980465 |
| 260.7765 | 6.242176 | <LOD | 13.41221 | <LOD | 15.27328 | <LOD | 34.14996 | 11.23308 | 2.714114 |
| 468.161 | 10.60792 | 455.234 | 10.29048 | <LOD | 19.10448 | <LOD | 45.83651 | 22.5142 | 4.113323 |
| 41.06379 | 3.368736 | <LOD | 7.409181 | <LOD | 17.13998 | <LOD | 43.18204 | 51.32398 | 4.27691 |
| 7.834289 | 2.55075 | <LOD | 5.625315 | <LOD | 17.83087 | <LOD | 45.08785 | 47.15414 | 4.20438 |
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| 10.48306 | 2.719124 | <LOD | 5.644597 | <LOD | 19.31511 | <LOD | 46.21618 | 61.80273 | 4.730192 |
| 14.26342 | 2.690826 | <LOD | 5.726933 | <LOD | 17.77432 | <LOD | 45.66557 | 61.66211 | 4.47117 |
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| 17.75963 | 2.702268 | <LOD | 5.848412 | <LOD | 17.51436 | <LOD | 42.95308 | 56.25913 | 4.245393 |
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|---|---|---|---|---|---|---|---|---|---|
| 149.6367 | 25.99678 | <LOD | 47.28632 | 2831.54 | 171.1136 | 100746.6 | 2641.672 | <LOD | 107.6249 |
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| 269.3311 | 6.243051 | <LOD | 13.15103 | <LOD | 14.91726 | <LOD | 31.83888 | 14.90927 | 2.775522 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.713116 | <LOD | 75.84678 | 287.7109 | 15.9928 | <LOD | 58.41345 | <LOD | 37.85205 |
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| 99.41822 | 28.21906 | <LOD | 244.1735 | 1505536 | 38294.27 | 1148332 | 29438.13 | <LOD | 125.0203 |
| <LOD | 5.869634 | <LOD | 75.35852 | 317.1945 | 16.78161 | <LOD | 55.10047 | <LOD | 38.33725 |
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| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
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| <LOD | 71.70919 | <LOD | 52.37489 | <LOD | 71.67062 | <LOD | 2.057168 | <LOD | 31.82117 |
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| <LOD | 80.29132 | <LOD | 61.63662 | <LOD | 167.2533 | 18.37685 | 5.685137 | 428.985 | 34.56057 |
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| <LOD | 76.07822 | <LOD | 55.88828 | <LOD | 126.4793 | <LOD | 11.79431 | 312.5157 | 26.23508 |
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| <LOD | 82.8291 | <LOD | 60.9523 | <LOD | 166.5916 | <LOD | 17.18034 | 489.6635 | 35.28471 |

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| <LOD | 233.156 | <LOD | 190.1666 | <LOD | 5387.248 | 482.9213 | 104.4772 | 58591.44 | 2022.893 |
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| <LOD | 70.74493 | <LOD | 54.40501 | <LOD | 119.7187 | <LOD | 6.457651 | <LOD | 39.7758 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 20.01262 | 5.07943 | <LOD | 2.10396 | <LOD | 1.787147 | 5.720846 | 0.936621 | <LOD | 420.1502 |
| 20.64661 | 5.0682 | <LOD | 2.084209 | <LOD | 2.035517 | <LOD | 2.662198 | <LOD | 382.1168 |
| 48.034 | 6.180978 | 12.69464 | 1.030973 | <LOD | 2.577428 | 136.8569 | 2.53763 | 5768.956 | 329.4247 |
| 48.67048 | 6.612628 | 25.24307 | 1.427194 | 488.8277 | 7.823919 | 233.5315 | 3.816895 | 10071.65 | 490.7401 |
| 42.78899 | 6.559435 | 48.71394 | 1.724156 | <LOD | 2.389105 | 63.3672 | 1.992005 | 7725.463 | 428.2113 |
| 40.84047 | 6.642013 | 56.72422 | 1.840839 | <LOD | 2.482702 | 69.94361 | 2.077729 | 6293.967 | 423.8114 |
| 30.13032 | 6.440333 | 58.23657 | 1.810714 | <LOD | 2.613279 | 78.2512 | 2.114262 | 7603.084 | 439.0914 |
| 37.2914 | 6.853809 | 70.94309 | 2.091524 | <LOD | 2.488824 | 72.50264 | 2.171229 | 7697.854 | 462.9423 |
| 32.20444 | 6.923577 | 61.14518 | 2.018215 | <LOD | 2.604798 | 67.66018 | 2.176824 | 8532.57 | 484.9691 |
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| 34.33028 | 6.453938 | 61.26941 | 1.858867 | <LOD | 2.581392 | 73.80585 | 2.072558 | 7343.613 | 431.9721 |
| 39.36445 | 6.536446 | 61.1483 | 1.87823 | <LOD | 2.375104 | 76.98358 | 2.13358 | 7727.692 | 451.5027 |
| 25.91076 | 6.234559 | 62.98677 | 1.84339 | <LOD | 2.507383 | 76.0578 | 2.056119 | 6955.591 | 413.8886 |
| 38.33503 | 6.608563 | 56.54425 | 1.836488 | <LOD | 2.725444 | 71.254 | 2.089699 | 7579.473 | 448.8432 |
| 27.33584 | 6.09366 | 40.97252 | 1.541743 | <LOD | 2.371526 | 76.029 | 2.056549 | 8445.067 | 440.8786 |
| 39.28153 | 6.815823 | 67.73051 | 2.041728 | <LOD | 2.566651 | 70.88717 | 2.143487 | 6369.396 | 443.7932 |
| 24.90134 | 6.261067 | 55.39389 | 1.739865 | <LOD | 2.362913 | 72.56384 | 2.011335 | 6989.996 | 416.9791 |
| 35.03071 | 6.480325 | 51.8634 | 1.74533 | <LOD | 2.572453 | 67.78618 | 2.018671 | 6388.491 | 427.4916 |
| 26.39561 | 6.565755 | 59.86617 | 1.880948 | <LOD | 2.384822 | 71.4381 | 2.090719 | 8343.645 | 456.9882 |
| 24.70066 | 6.416731 | 59.7011 | 1.83972 | <LOD | 2.568617 | 79.40845 | 2.139386 | 5680.385 | 403.9614 |
| 41.63407 | 6.803323 | 53.85986 | 1.852456 | <LOD | 2.519873 | 77.20422 | 2.227226 | 6799.626 | 434.2061 |
| <LOD | 36.32118 | 49.29541 | 3.289644 | <LOD | 4.830001 | 53.36949 | 3.532105 | 4365.24 | 715.1702 |
| 29.21681 | 6.290233 | 52.63582 | 1.755655 | <LOD | 2.140041 | 66.00266 | 1.996122 | 6505.304 | 404.0663 |
| 48.60696 | 6.356216 | 54.75662 | 1.772815 | <LOD | 2.643948 | 73.45596 | 2.070128 | 5561.34 | 389.7764 |
| 54.42775 | 6.380536 | 56.4398 | 1.793425 | <LOD | 2.45169 | 72.20091 | 2.052886 | 6322.828 | 397.5609 |
| 56.54083 | 6.838963 | 55.55204 | 1.861046 | <LOD | 2.592592 | 80.20167 | 2.244303 | 6329.044 | 418.4905 |
| 35.3263 | 6.47937 | 51.666 | 1.759276 | <LOD | 2.309091 | 68.55947 | 2.04912 | 5105.08 | 392.5948 |
| 26.55798 | 6.617803 | 62.31456 | 1.931088 | <LOD | 2.43416 | 77.06107 | 2.178188 | 7537.335 | 453.5323 |
| | | | | | | | | | |
| 36.67603 | 5.4856 | <LOD | 2.093364 | <LOD | 1.697546 | 7.551238 | 1.027788 | <LOD | 390.9895 |
| 44.84673 | 6.269704 | 13.73636 | 1.057423 | <LOD | 2.529558 | 128.6032 | 2.48559 | 5521.347 | 315.0536 |
| 37.07505 | 6.501163 | 61.14898 | 1.88014 | <LOD | 2.654045 | 78.31936 | 2.152551 | 6464.657 | 418.9676 |
| 35.0648 | 6.531908 | 60.04062 | 1.864569 | <LOD | 2.542646 | 77.39856 | 2.140741 | 6588.073 | 428.0849 |
| 36.58231 | 6.393566 | 55.05908 | 1.793083 | <LOD | 2.665656 | 76.16701 | 2.11433 | 6538.014 | 411.2702 |
| 34.9932 | 6.503745 | 53.44905 | 1.798764 | <LOD | 2.737154 | 72.46674 | 2.104675 | 4445.64 | 389.9642 |
| 35.76482 | 6.662657 | 55.77495 | 1.848068 | <LOD | 2.746667 | 76.56678 | 2.173795 | 6474.338 | 426.3565 |
| 35.47498 | 6.567273 | 56.09148 | 1.839772 | <LOD | 2.560726 | 76.0408 | 2.160037 | 6126.228 | 411.8806 |
| 26.69285 | 6.595445 | 56.38502 | 1.834868 | <LOD | 2.561124 | 74.53466 | 2.130239 | 8245.893 | 453.9058 |
| 37.95009 | 6.507582 | 56.2944 | 1.798923 | <LOD | 2.439984 | 80.12618 | 2.153329 | 7059.25 | 423.5072 |
| 23.23931 | 6.10067 | 62.50409 | 1.827466 | <LOD | 2.530719 | 78.64037 | 2.074638 | 6081.39 | 399.7441 |
| 19.1662 | 6.163608 | 54.60326 | 1.70837 | <LOD | 2.502867 | 81.38385 | 2.085809 | 7196.02 | 410.0228 |
| 32.14749 | 5.663102 | 44.16541 | 1.480843 | <LOD | 2.36646 | 73.97667 | 1.897153 | 4168.318 | 310.9711 |
| 24.16605 | 6.053753 | 53.60029 | 1.707618 | <LOD | 2.452271 | 73.9686 | 2.017069 | 8575.101 | 435.5092 |
| 29.67625 | 6.057111 | 50.03186 | 1.650585 | <LOD | 2.616788 | 64.0529 | 1.894315 | 5655.083 | 379.8489 |
| 39.74716 | 6.326602 | 60.95464 | 1.855406 | <LOD | 2.558615 | 68.8493 | 2.014683 | 5501.247 | 400.4582 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 29862.71 | 767.1036 | 23.75873 | 5.88823 | <LOD | 22.79609 | <LOD | 15.0459 | <LOD | 22085.06 |
| 31.65759 | 5.231976 | <LOD | 1.979861 | <LOD | 1.921181 | 5.997425 | 0.958982 | <LOD | 414.11 |
| 40.04652 | 6.048423 | 13.5523 | 1.028626 | <LOD | 2.704386 | 133.0408 | 2.460474 | 5981.689 | 321.0422 |

| Zr | Zr +/- |
|---|---|
| 23.51242 | 1.490931 |
| 5.927678 | 1.361879 |
| 433.1309 | 4.735854 |
| 266.0292 | 3.948318 |
| 226.9882 | 3.553056 |
| 283.1668 | 4.023591 |
| 318.9874 | 4.193542 |
| 303.5317 | 4.315744 |
| 224.2549 | 3.758587 |
| 308.0142 | 4.360519 |
| 290.2806 | 3.984135 |
| 276.9857 | 3.923461 |
| 261.4386 | 3.676619 |
| 277.4708 | 3.970459 |
| 154.1347 | 2.837017 |
| 288.0574 | 4.169291 |
| 292.4836 | 3.910321 |
| 263.9914 | 3.805636 |
| 292.4713 | 4.09151 |
| 295.6024 | 4.032031 |
| 254.449 | 3.90336 |
| 155.7158 | 5.601049 |
| 157.3574 | 2.938615 |
| 168.0561 | 3.006221 |
| 169.3295 | 3.011513 |
| 264.3287 | 3.953803 |
| 215.5697 | 3.449379 |
| 285.2626 | 4.072319 |
| | |
| 16.71236 | 1.537126 |
| 458.052 | 4.970438 |
| 253.6116 | 3.741301 |
| 283.2523 | 3.979561 |
| 215.7764 | 3.407992 |
| 220.8288 | 3.505058 |
| 283.0105 | 4.054014 |
| 228.9865 | 3.599149 |
| 305.603 | 4.206097 |
| 298.2629 | 4.065371 |
| 203.6431 | 3.206454 |
| 299.4306 | 3.919993 |
| 126.5552 | 2.441964 |
| 172.8601 | 2.959775 |
| 171.0134 | 2.927817 |
| 183.5958 | 3.126481 |

| | |
|---|---|
| <LOD | 16.94384 |
| 22.94682 | 1.515498 |
| 438.2286 | 4.692572 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 31.83 | 14-Apr-09 | 8:16:24 | 1 | -0.0292 | | | | |
| 64.9 | 14-Apr-09 | 8:18:19 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 64.86 | 14-Apr-09 | 8:21:36 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 64.86 | 14-Apr-09 | 8:24:59 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 63.43 | 14-Apr-09 | 8:29:43 | 5 | | Ex-situ | | NSP-FL-1A | 0-1 ft |
| 63.63 | 14-Apr-09 | 8:46:45 | 6 | | Ex-situ | | NSP-FL-3E | 0-1 ft |
| 64.93 | 14-Apr-09 | 9:13:06 | 7 | | Ex-situ | | NSP-FL-3D | 0-1 ft |
| 64.58 | 14-Apr-09 | 9:47:27 | 8 | | Ex-situ | | NSP-FL-4D | 0-1 ft |
| 64.05 | 14-Apr-09 | 10:22:32 | 9 | | Ex-situ | | SSP-FL-1P | 0-1 ft |
| 63.77 | 14-Apr-09 | 10:27:49 | 10 | | Ex-situ | | SSP-FL-2 | 0-1 ft |
| 64.28 | 14-Apr-09 | 10:31:42 | 11 | | Ex-situ | | SSP-SW-1 | 0-1 ft |
| 62.93 | 14-Apr-09 | 10:35:37 | 12 | | Ex-situ | | SSP-SW-2 | 0-1 ft |
| 66.23 | 14-Apr-09 | 10:39:05 | 13 | | Ex-situ | | SSP-SW-3 | 0-1 ft |
| 32.89 | 14-Apr-09 | 11:01:13 | 14 | -0.029 | | | | |
| 64.97 | 14-Apr-09 | 11:05:17 | 15 | | Ex-situ | Si Blank | | 0-1 ft |
| 66.26 | 14-Apr-09 | 11:08:43 | 16 | | Ex-situ | XRF 250 | | 0-1 ft |
| 65.96 | 14-Apr-09 | 11:12:47 | 17 | | Ex-situ | | SSP-FL-1O | 0-1 ft |
| 66.35 | 14-Apr-09 | 11:17:13 | 18 | | Ex-situ | | SSP-SW-4 | 0-1 ft |
| 65.1 | 14-Apr-09 | 11:30:48 | 19 | | Ex-situ | | SSP-FL-2O | 0-1 ft |
| 63.67 | 14-Apr-09 | 11:33:44 | 20 | | Ex-situ | | SSP-FL-3O | 0-1 ft |
| 66.1 | 14-Apr-09 | 11:36:53 | 21 | | Ex-situ | | SSP-SW-5 | 0-1 ft |
| 66.21 | 14-Apr-09 | 11:39:36 | 22 | | Ex-situ | | SSP-SW-6 | 0-1 ft |
| 67.65 | 14-Apr-09 | 13:36:49 | 23 | | Ex-situ | | SSP-FL-3N | 0-1 ft |
| 64.13 | 14-Apr-09 | 13:40:33 | 24 | | Ex-situ | | SSP-FL-2N | 0-1 ft |
| 67.59 | 14-Apr-09 | 13:43:35 | 25 | | Ex-situ | | SSP-FL-1N | 0-1 ft |
| 67.89 | 14-Apr-09 | 13:53:27 | 26 | | Ex-situ | | SSP-SW-7 | 0-1 ft |
| 69.27 | 14-Apr-09 | 13:59:43 | 27 | | Ex-situ | | SSP-SW-8 | 0-1 ft |
| 70.87 | 14-Apr-09 | 14:03:52 | 28 | | Ex-situ | | SSP-SW-9 | 0-1 ft |
| 34.97 | 14-Apr-09 | 14:23:56 | 29 | -0.0276 | | | | |
| 68.46 | 14-Apr-09 | 14:26:33 | 30 | | Ex-situ | Si Blank | | 0-1 ft |
| 66.09 | 14-Apr-09 | 14:30:13 | 31 | | Ex-situ | XRF 250 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.095322 | <LOD | 3.417001 | <LOD | 12.62348 | <LOD | 27.66921 | <LOD | 5.585649 |
| 95.01945 | 3.655459 | <LOD | 8.082001 | <LOD | 12.25434 | <LOD | 27.87831 | <LOD | 5.933932 |
| 242.7893 | 5.973331 | <LOD | 12.95253 | <LOD | 14.88813 | <LOD | 33.1887 | 15.19522 | 2.806773 |
| 474.7131 | 10.66628 | 453.944 | 10.27123 | <LOD | 18.10364 | <LOD | 48.98219 | 14.87443 | 3.889562 |
| 11.05555 | 2.53757 | <LOD | 5.505004 | <LOD | 17.27073 | <LOD | 46.12733 | 60.62809 | 4.345599 |
| 90.71649 | 4.24313 | <LOD | 9.357868 | <LOD | 17.67247 | <LOD | 44.78139 | 53.6191 | 4.216758 |
| 22.09575 | 2.774616 | <LOD | 6.118557 | 38.31112 | 6.749794 | <LOD | 45.20816 | 50.95118 | 4.128624 |
| 17.95024 | 2.665679 | <LOD | 6.074687 | <LOD | 16.67638 | <LOD | 41.26423 | 63.98986 | 4.355 |
| 18.88809 | 2.588749 | <LOD | 5.607951 | <LOD | 16.884 | <LOD | 40.73962 | 67.35775 | 4.331895 |
| 18.33948 | 2.599515 | <LOD | 5.47162 | <LOD | 15.60992 | <LOD | 39.91473 | 57.59876 | 4.093814 |
| 42.37559 | 3.060171 | <LOD | 6.913412 | <LOD | 15.72018 | <LOD | 39.20063 | 66.24818 | 4.195573 |
| 21.5329 | 2.690508 | <LOD | 6.092614 | <LOD | 15.84827 | <LOD | 38.7293 | 56.51006 | 4.12128 |
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| 14.76319 | 2.747756 | <LOD | 5.963305 | <LOD | 18.03858 | <LOD | 46.07282 | 71.53336 | 4.765083 |
| 17.72597 | 2.611454 | <LOD | 6.011536 | <LOD | 16.54089 | <LOD | 39.83085 | 52.20104 | 4.052427 |
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| 7.966662 | 2.175452 | <LOD | 4.802003 | <LOD | 15.30935 | <LOD | 35.61143 | 38.63086 | 3.484524 |
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| 12.58818 | 2.559061 | <LOD | 5.705502 | <LOD | 16.777 | <LOD | 43.06875 | 72.70259 | 4.576757 |
| 10.95868 | 2.667735 | <LOD | 5.821482 | <LOD | 17.5653 | <LOD | 46.77636 | 76.24403 | 4.914844 |
| 17.47656 | 2.779084 | <LOD | 6.210893 | <LOD | 17.21315 | <LOD | 43.19819 | 55.86461 | 4.345387 |
| 27.34983 | 3.163592 | <LOD | 7.225205 | <LOD | 18.5149 | <LOD | 45.52578 | 64.2114 | 4.750817 |
| 33.77287 | 3.433299 | <LOD | 7.880998 | <LOD | 18.46711 | <LOD | 46.42878 | 91.4354 | 5.551109 |
| | | | | | | | | | |
| <LOD | 4.861413 | <LOD | 3.304647 | <LOD | 12.37651 | <LOD | 26.73264 | <LOD | 5.672438 |
| 247.4363 | 6.050497 | <LOD | 12.68245 | <LOD | 14.18314 | <LOD | 33.32106 | 8.598317 | 2.579485 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.932405 | <LOD | 75.84775 | 673.54 | 22.62937 | <LOD | 55.89248 | <LOD | 38.07823 |
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| <LOD | 7.334112 | <LOD | 75.21903 | 5576.102 | 73.82973 | <LOD | 78.40328 | <LOD | 38.85202 |
| 480.6876 | 12.29181 | <LOD | 85.78993 | 34408.54 | 326.7683 | 485.0844 | 51.41092 | 426.4178 | 16.23031 |
| <LOD | 7.88432 | <LOD | 86.42424 | 37406.54 | 338.2004 | <LOD | 110.892 | <LOD | 42.98361 |
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| <LOD | 7.504457 | <LOD | 84.58479 | 34661.5 | 314.1917 | <LOD | 110.1166 | <LOD | 42.30873 |
| <LOD | 7.617924 | <LOD | 85.47939 | 24632.35 | 234.8556 | <LOD | 93.88447 | <LOD | 42.44331 |
| <LOD | 7.584479 | <LOD | 83.45087 | 23711.68 | 222.2162 | <LOD | 98.86631 | <LOD | 41.51662 |
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| <LOD | 5.578215 | <LOD | 75.67304 | 2347.177 | 42.12739 | <LOD | 55.15522 | <LOD | 37.88478 |
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| <LOD | 6.876038 | <LOD | 83.87486 | 21534.93 | 210.2332 | <LOD | 96.69011 | <LOD | 42.05989 |
| <LOD | 7.113758 | <LOD | 83.79008 | 18651.69 | 184.6205 | <LOD | 91.4546 | <LOD | 41.92302 |
| <LOD | 6.590561 | <LOD | 80.17804 | 15832.13 | 155.9339 | <LOD | 87.87915 | <LOD | 39.82035 |
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| <LOD | 7.674781 | <LOD | 82.9585 | 38792.18 | 346.7313 | <LOD | 111.4149 | <LOD | 42.26519 |
| <LOD | 7.555374 | <LOD | 86.84318 | 42146.77 | 394.9971 | <LOD | 117.9423 | <LOD | 44.43827 |
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| <LOD | 5.363213 | <LOD | 73.43007 | 267.3585 | 16.11876 | <LOD | 50.96162 | <LOD | 38.14529 |
| <LOD | 7.001863 | <LOD | 74.90999 | 5333.414 | 72.09912 | <LOD | 77.26667 | <LOD | 39.39677 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 71.93149 | <LOD | 52.78191 | <LOD | 72.79014 | <LOD | 2.54503 | <LOD | 32.93862 |
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| <LOD | 82.54997 | 445.9237 | 22.50584 | <LOD | 199.7067 | 28.96557 | 5.72149 | <LOD | 85.67944 |
| <LOD | 81.9152 | <LOD | 59.42879 | <LOD | 180.21 | 26.17718 | 5.708733 | 549.3038 | 35.68089 |
| <LOD | 79.90104 | <LOD | 59.80015 | <LOD | 175.2098 | 25.39109 | 5.807952 | 528.188 | 35.81298 |
| <LOD | 79.79921 | <LOD | 58.858 | <LOD | 171.6297 | <LOD | 16.21945 | 284.2332 | 30.5057 |
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| <LOD | 84.71697 | <LOD | 61.94954 | <LOD | 182.0764 | 29.30584 | 5.806945 | 450.7459 | 35.00588 |
| <LOD | 79.48772 | <LOD | 58.77345 | <LOD | 159.7101 | 19.73027 | 4.351888 | 334.0385 | 28.46482 |
| <LOD | 79.02071 | <LOD | 57.96058 | <LOD | 148.3917 | 20.13572 | 4.026944 | 496.1996 | 30.3383 |
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| <LOD | 80.60917 | <LOD | 59.36723 | <LOD | 155.2784 | 13.20395 | 4.359088 | 706.598 | 35.24295 |
| <LOD | 80.0677 | <LOD | 59.689 | <LOD | 169.5183 | 22.17386 | 5.011542 | 628.6625 | 35.41315 |
| <LOD | 83.02943 | <LOD | 62.06192 | <LOD | 175.5146 | 28.61291 | 6.110929 | 439.5035 | 35.68441 |
| <LOD | 79.00804 | <LOD | 58.59992 | <LOD | 170.1614 | 37.87394 | 5.828622 | 473.2021 | 34.45532 |
| <LOD | 82.67825 | <LOD | 61.95105 | <LOD | 179.584 | 34.74074 | 6.37464 | 463.7205 | 36.77467 |
| <LOD | 82.21706 | <LOD | 61.26762 | <LOD | 170.5562 | 30.52698 | 5.360308 | 462.644 | 33.91885 |
| <LOD | 84.80003 | <LOD | 63.87171 | <LOD | 182.4973 | <LOD | 17.65739 | 706.6967 | 40.5811 |
| <LOD | 86.73731 | <LOD | 65.71787 | <LOD | 194.9519 | 31.93817 | 6.522277 | 824.3962 | 44.50959 |
| <LOD | 70.23328 | <LOD | 53.66876 | <LOD | 61.11609 | <LOD | 2.169844 | <LOD | 31.19276 |
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| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
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| 26.56137 | 5.149519 | <LOD | 2.006896 | <LOD | 1.926474 | 6.787699 | 0.963086 | <LOD | 414.8133 |
| 31.72932 | 5.146337 | <LOD | 2.13139 | <LOD | 2.03395 | <LOD | 2.674951 | <LOD | 392.7644 |
| 38.34831 | 6.156733 | 16.79008 | 1.091021 | <LOD | 2.589489 | 131.1419 | 2.46125 | 6061.361 | 328.4234 |
| 41.50973 | 6.534107 | 24.58217 | 1.41042 | 510.0431 | 7.990668 | 229.0627 | 3.755258 | 9528.635 | 492.9786 |
| 27.01813 | 6.248781 | 64.85964 | 1.860178 | <LOD | 2.47242 | 89.02551 | 2.191738 | 8376.796 | 448.9559 |
| <LOD | 18.57289 | 59.77395 | 1.814157 | <LOD | 2.407892 | 83.09105 | 2.146974 | 8573.668 | 445.9718 |
| 29.87532 | 6.152359 | 55.52142 | 1.723599 | <LOD | 2.487863 | 78.38969 | 2.056019 | 7628.708 | 426.7155 |
| 23.72011 | 6.329129 | 64.616 | 1.84058 | <LOD | 2.582446 | 80.75154 | 2.083174 | 7267.819 | 409.8848 |
| 22.46973 | 6.007308 | 73.86111 | 1.906309 | <LOD | 2.204786 | 65.43428 | 1.86152 | 7106.851 | 393.4745 |
| 27.18207 | 6.145637 | 67.66806 | 1.836103 | <LOD | 2.417104 | 82.49085 | 2.054626 | 8314.882 | 406.0092 |
| 24.32212 | 5.910116 | 61.17212 | 1.714921 | <LOD | 2.388395 | 75.42411 | 1.929933 | 5903.802 | 366.0553 |
| 31.46564 | 6.20585 | 59.18998 | 1.758116 | <LOD | 2.477839 | 56.08262 | 1.785575 | 6857.127 | 385.1455 |
| 32.62915 | 5.19474 | <LOD | 2.012834 | <LOD | 1.979941 | 6.773318 | 0.964466 | <LOD | 425.726 |
| 45.68633 | 6.210747 | 13.79474 | 1.048088 | <LOD | 2.582378 | 136.2443 | 2.531144 | 5654.175 | 321.5465 |
| 34.10435 | 6.556945 | 79.07629 | 2.113309 | <LOD | 2.702002 | 73.60452 | 2.098028 | 7092.101 | 443.7381 |
| 22.99079 | 6.186712 | 50.9652 | 1.656275 | <LOD | 2.501446 | 56.19527 | 1.794077 | 6239.737 | 391.7648 |
| <LOD | 18.08028 | 63.5714 | 1.79702 | <LOD | 2.229506 | 64.93876 | 1.872257 | 6195.096 | 372.8954 |
| 18.26723 | 5.725621 | 44.94299 | 1.486559 | <LOD | 2.368627 | 67.33985 | 1.819226 | 5033.656 | 344.1405 |
| 39.17455 | 6.408707 | 52.9876 | 1.705519 | <LOD | 2.61337 | 66.06905 | 1.935427 | 8141.669 | 411.2598 |
| 29.24171 | 6.368614 | 70.36809 | 1.94041 | <LOD | 2.554204 | 80.49217 | 2.111407 | 7607.898 | 425.514 |
| 25.08609 | 6.419575 | 81.90894 | 2.160164 | <LOD | 2.441156 | 52.01274 | 1.842732 | 5925.136 | 421.6456 |
| 28.23323 | 6.204566 | 75.71573 | 1.97996 | <LOD | 2.387939 | 65.88859 | 1.916444 | 6356.752 | 410.4448 |
| <LOD | 19.48822 | 71.87737 | 2.041863 | <LOD | 2.482208 | 63.48433 | 1.995705 | 7499.821 | 447.838 |
| 38.11573 | 6.633536 | 70.6454 | 1.998316 | <LOD | 2.534977 | 69.58962 | 2.043128 | 6900.989 | 423.6115 |
| 44.41406 | 6.836116 | 73.78902 | 2.122876 | <LOD | 2.57096 | 65.73844 | 2.079718 | 8307.73 | 466.0303 |
| 34.93138 | 6.931731 | 77.90419 | 2.242576 | <LOD | 2.536299 | 52.18539 | 1.963001 | 6742.745 | 470.3991 |
| 30.34062 | 5.314531 | <LOD | 2.020365 | <LOD | 2.051482 | 5.859231 | 0.972855 | <LOD | 374.5171 |
| 34.26142 | 6.094868 | 11.5596 | 1.003229 | <LOD | 2.548656 | 129.0695 | 2.451518 | 4918.161 | 308.9503 |

| Zr | Zr +/- |
|---|---|
| 14.155 | 1.437585 |
| 7.795256 | 1.382107 |
| 491.3831 | 5.11308 |
| 265.8038 | 3.922624 |
| 289.8223 | 3.886139 |
| 263.2949 | 3.712067 |
| 247.1797 | 3.520448 |
| 392.8616 | 4.648677 |
| 280.4657 | 3.678563 |
| 353.9942 | 4.249662 |
| 298.9135 | 3.740109 |
| 300.9834 | 3.907531 |
| | |
| 18.14297 | 1.470485 |
| 463.157 | 4.955199 |
| 305.3194 | 4.156604 |
| 299.1948 | 3.909184 |
| 292.2428 | 3.804729 |
| 231.2684 | 3.201252 |
| 345.0018 | 4.320451 |
| 332.3897 | 4.245109 |
| 218.2002 | 3.457039 |
| 284.9518 | 3.810238 |
| 268.0208 | 3.889148 |
| 355.5682 | 4.549311 |
| 281.5765 | 4.113443 |
| 239.1622 | 3.862797 |
| | |
| 18.53848 | 1.508981 |
| 437.7068 | 4.744315 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 33.3 | 15-Apr-09 | 9:22:20 | 1 | -0.0305 | | | | |
| 66.54 | 15-Apr-09 | 9:24:17 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 65.93 | 15-Apr-09 | 9:28:04 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 66.95 | 15-Apr-09 | 9:30:35 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 66.62 | 15-Apr-09 | 9:41:49 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 67.98 | 15-Apr-09 | 9:49:20 | 6 | | Ex-situ | | NW-2 | 0-0.5 ft |
| 66.08 | 15-Apr-09 | 9:53:38 | 7 | | Ex-situ | | CA-7 | 0-1 ft |
| 67.79 | 15-Apr-09 | 9:57:14 | 8 | | Ex-situ | | NW-5 | 0-1 ft |
| 65.9 | 15-Apr-09 | 10:32:09 | 9 | | Ex-situ | | CA-12 | 0-1 ft |
| 66.37 | 15-Apr-09 | 10:35:23 | 10 | | Ex-situ | | CA-16 | 0-1 ft |
| 68.63 | 15-Apr-09 | 10:38:31 | 11 | | Ex-situ | | CA-13 | 0-1 ft |
| 65.95 | 15-Apr-09 | 10:42:08 | 12 | | Ex-situ | | CA-15 | 0-1 ft |
| 67.33 | 15-Apr-09 | 10:45:26 | 13 | | Ex-situ | | CA-14 | 0-1 ft |
| 70.65 | 15-Apr-09 | 10:48:40 | 14 | | Ex-situ | | NW-1 | 0-1 ft |
| 68.94 | 15-Apr-09 | 10:51:25 | 15 | | Ex-situ | | NW3 | 0-1 ft |
| 71.47 | 15-Apr-09 | 10:54:11 | 16 | | Ex-situ | | NW-4 | 0-1 ft |
| 71.45 | 15-Apr-09 | 10:57:05 | 17 | | Ex-situ | | NW-6 | 0-1 ft |
| 80.17 | 15-Apr-09 | 11:26:39 | 18 | | Ex-situ | | SSP-SW-10 | 0-1 ft |
| 33.01 | 15-Apr-09 | 12:53:34 | 19 | -0.0307 | | | | |
| 69.86 | 15-Apr-09 | 12:55:29 | 20 | | Ex-situ | Si Blank | | 0-1 ft |
| 68.91 | 15-Apr-09 | 12:58:32 | 21 | | Ex-situ | XRF 250 | | 0-1 ft |
| 70.83 | 15-Apr-09 | 13:39:40 | 22 | | Ex-situ | | SSP-FL-3M | 0-1 ft |
| 71.13 | 15-Apr-09 | 13:43:15 | 23 | | Ex-situ | | SSP-FL-3L | 0-1 ft |
| 72.29 | 15-Apr-09 | 13:46:39 | 24 | | Ex-situ | | SSP-SW-11 | 0-1 ft |
| 71.2 | 15-Apr-09 | 13:49:09 | 25 | | Ex-situ | | SSP-SW-12 | 0-1 ft |
| 70.79 | 15-Apr-09 | 14:21:40 | 26 | | Ex-situ | | SSP-FL-3K | 0-1 ft |
| 70.3 | 15-Apr-09 | 14:24:33 | 27 | | Ex-situ | | SSP-FL-3J | 0-1 ft |
| 70.58 | 15-Apr-09 | 14:27:23 | 28 | | Ex-situ | | SSP-SW-13 | 0-1 ft |
| 70.11 | 15-Apr-09 | 14:30:12 | 29 | | Ex-situ | | SSP-sw-14 | 0-1 ft |
| 0.1 | 15-Apr-09 | 15:09:51 | 30 | 0 | | | | |
| 36.73 | 15-Apr-09 | 15:10:01 | 31 | -0.0297 | | | | |
| 70.27 | 15-Apr-09 | 15:12:08 | 32 | | Ex-situ | Si Blank | | 0-1 ft |
| 69.38 | 15-Apr-09 | 15:15:00 | 33 | | Ex-situ | XRF 250 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 4.722757 | <LOD | 3.158985 | <LOD | 12.29874 | <LOD | 26.71378 | <LOD | 5.636078 |
| 99.34242 | 3.779565 | <LOD | 8.267056 | <LOD | 12.08574 | <LOD | 26.39961 | <LOD | 5.352657 |
| 240.8589 | 6.039036 | <LOD | 13.19611 | <LOD | 14.73572 | <LOD | 32.53536 | 13.06197 | 2.764184 |
| 478.3522 | 10.8479 | 440.8558 | 10.35627 | <LOD | 18.68221 | <LOD | 46.61808 | 17.26339 | 4.012486 |
| 32.61959 | 2.863784 | <LOD | 6.466709 | <LOD | 16.11102 | <LOD | 37.1981 | 81.67545 | 4.60867 |
| 1483.792 | 19.55306 | 61.73356 | 11.81467 | 1303.685 | 23.53812 | <LOD | 49.44704 | 3693.719 | 42.06499 |
| 40.15134 | 2.975802 | <LOD | 6.551301 | <LOD | 16.9875 | <LOD | 34.35506 | 97.054 | 4.862875 |
| 2348.43 | 25.8682 | 43.16863 | 13.89968 | 217.5061 | 9.976323 | <LOD | 40.78711 | 1667.942 | 22.61566 |
| 489.1869 | 8.790109 | 23.88123 | 6.220693 | 347.9345 | 11.04529 | <LOD | 35.4959 | 1700.278 | 21.67633 |
| 98.33329 | 4.302402 | 13.4268 | 3.336861 | 23.11203 | 6.289159 | <LOD | 39.24417 | 165.0356 | 6.386667 |
| 2504.366 | 28.86544 | 101.2884 | 15.43048 | 1000.029 | 20.6367 | <LOD | 51.30743 | 4637.799 | 50.61187 |
| 1764.275 | 21.61504 | 45.30854 | 12.48156 | 920.4854 | 19.05466 | <LOD | 45.64057 | 3328.413 | 38.01823 |
| 85.92661 | 4.051134 | <LOD | 9.014239 | 39.5901 | 6.512354 | <LOD | 35.85724 | 104.4947 | 5.264946 |
| 28.66589 | 2.641443 | <LOD | 6.099975 | <LOD | 15.04378 | <LOD | 31.73768 | 82.14016 | 4.450778 |
| 42.08564 | 3.074872 | <LOD | 6.86001 | <LOD | 16.36949 | <LOD | 32.77689 | 115.5884 | 5.315568 |
| 83.86527 | 4.144423 | <LOD | 9.419102 | 34.05239 | 6.623209 | <LOD | 36.81548 | 170.6617 | 6.670127 |
| 24.52997 | 3.902265 | <LOD | 8.736814 | <LOD | 21.48763 | <LOD | 50.74534 | 47.62028 | 5.445749 |
| <LOD | 4.947252 | <LOD | 3.258898 | <LOD | 12.26507 | <LOD | 25.31496 | <LOD | 5.59449 |
| 237.652 | 6.08683 | <LOD | 12.99559 | <LOD | 15.28577 | <LOD | 32.50589 | 11.82739 | 2.767594 |
| 21.18017 | 3.025245 | <LOD | 6.781499 | <LOD | 17.65038 | <LOD | 45.77104 | 85.47474 | 5.290768 |
| 67.65929 | 4.232539 | <LOD | 9.648684 | <LOD | 18.77514 | <LOD | 50.84907 | 90.76102 | 5.533071 |
| 10.63125 | 2.563867 | <LOD | 5.585861 | <LOD | 16.42244 | <LOD | 39.96932 | 45.28027 | 4.103361 |
| 13.15143 | 2.6851 | <LOD | 6.177514 | <LOD | 17.17296 | <LOD | 42.62902 | 59.99049 | 4.531857 |
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| 18.27152 | 2.98044 | <LOD | 6.809313 | <LOD | 16.3005 | <LOD | 44.52235 | 76.05342 | 5.083827 |
| 8.483844 | 2.483368 | <LOD | 5.436522 | <LOD | 16.68553 | <LOD | 39.98388 | 60.17705 | 4.436809 |
| <LOD | 6.628069 | <LOD | 4.765364 | <LOD | 15.22841 | <LOD | 34.2842 | 38.17447 | 3.700159 |
| <LOD | 4.811938 | <LOD | 3.226741 | <LOD | 12.2636 | <LOD | 26.03287 | <LOD | 5.730295 |
| 231.8095 | 6.029437 | <LOD | 13.10607 | <LOD | 15.05724 | <LOD | 31.43901 | <LOD | 7.589895 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.555716 | <LOD | 74.29193 | 260.0255 | 15.56078 | <LOD | 52.63165 | <LOD | 37.86247 |
| <LOD | 5.772767 | <LOD | 73.41508 | <LOD | 24.9913 | <LOD | 62.82001 | 112.4849 | 12.80192 |
| <LOD | 7.212423 | <LOD | 73.89903 | 5614.689 | 75.34348 | <LOD | 74.98116 | <LOD | 39.11159 |
| 481.1884 | 12.50836 | <LOD | 82.49783 | 34184.85 | 331.1612 | 515.432 | 52.59666 | 363.5174 | 15.97617 |
| <LOD | 6.611857 | <LOD | 77.47896 | 19598.14 | 190.9619 | <LOD | 81.62344 | <LOD | 40.53339 |
| <LOD | 12.90811 | <LOD | 81.06055 | 32069.69 | 313.478 | 321.0155 | 48.81157 | <LOD | 43.5929 |
| <LOD | 6.665996 | <LOD | 76.49217 | 14672.24 | 150.0256 | <LOD | 76.09486 | <LOD | 39.92457 |
| <LOD | 12.04605 | <LOD | 76.17589 | 26204.99 | 250.6339 | <LOD | 114.773 | <LOD | 41.27755 |
| <LOD | 8.220603 | <LOD | 71.2856 | 18710 | 179.876 | 107.3963 | 33.7541 | <LOD | 38.71606 |
| <LOD | 7.41017 | <LOD | 79.59451 | 25684.92 | 245.9423 | <LOD | 97.2818 | <LOD | 42.07546 |
| <LOD | 15.02004 | <LOD | 80.53183 | 34517 | 337.1631 | 246.9071 | 48.22769 | <LOD | 43.82671 |
| <LOD | 12.37995 | <LOD | 75.76183 | 30530.35 | 294.1212 | <LOD | 120.1188 | <LOD | 41.86815 |
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| <LOD | 6.632797 | <LOD | 71.32373 | 13646.58 | 145.5233 | <LOD | 77.2785 | <LOD | 39.93759 |
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| <LOD | 7.376706 | <LOD | 72.90236 | 5446.889 | 75.0789 | <LOD | 79.33951 | <LOD | 39.70934 |
| <LOD | 8.181605 | <LOD | 84.33688 | 38172.91 | 376.1635 | <LOD | 112.1517 | <LOD | 45.98279 |
| <LOD | 7.794003 | <LOD | 83.75621 | 52052.02 | 504.4066 | <LOD | 130.8741 | <LOD | 46.40719 |
| <LOD | 7.439293 | <LOD | 80.80617 | 20682.92 | 217.9569 | <LOD | 99.7785 | <LOD | 44.11578 |
| <LOD | 7.323092 | <LOD | 81.23407 | 29546.12 | 293.7535 | <LOD | 105.7032 | <LOD | 44.75631 |
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| <LOD | 6.873397 | <LOD | 80.21687 | 28282.31 | 277.1021 | <LOD | 97.01447 | <LOD | 44.1084 |
| <LOD | 7.048941 | <LOD | 79.33606 | 14829.75 | 159.3034 | <LOD | 82.60019 | <LOD | 42.87262 |
| <LOD | 5.520222 | <LOD | 71.19073 | 351.1006 | 17.81719 | <LOD | 45.53587 | <LOD | 38.48932 |
| <LOD | 6.889068 | <LOD | 73.01381 | 5245.375 | 73.39906 | <LOD | 71.3297 | <LOD | 39.83457 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 70.41023 | <LOD | 52.59676 | <LOD | 66.77129 | <LOD | 2.033286 | <LOD | 27.90139 |
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| <LOD | 80.21055 | 286.8967 | 22.37721 | <LOD | 201.6215 | 27.88494 | 5.796912 | <LOD | 86.01175 |
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| <LOD | 77.30676 | <LOD | 58.80884 | <LOD | 146.1222 | 27.31935 | 4.816278 | 160.5536 | 26.10996 |
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| <LOD | 69.97868 | <LOD | 54.84873 | <LOD | 110.7669 | <LOD | 9.242713 | 236.3058 | 22.64481 |
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| <LOD | 104.7866 | <LOD | 82.28947 | <LOD | 198.7205 | <LOD | 18.76262 | 820.7469 | 50.91808 |
| | | | | | | | | | |
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| <LOD | 82.58704 | <LOD | 64.26949 | <LOD | 179.3057 | 26.3241 | 6.261617 | 561.9381 | 38.85036 |
| <LOD | 83.09967 | <LOD | 64.93713 | <LOD | 192.5055 | <LOD | 22.01637 | 1279.391 | 53.02702 |
| <LOD | 78.74097 | <LOD | 61.92384 | <LOD | 152.1459 | <LOD | 13.49705 | 697.7642 | 36.76188 |
| <LOD | 80.37802 | <LOD | 62.40017 | <LOD | 163.4911 | <LOD | 15.9371 | 620.7615 | 37.28199 |
| <LOD | 80.14353 | <LOD | 63.38445 | <LOD | 183.9086 | <LOD | 19.84747 | 458.2239 | 38.23996 |
| <LOD | 82.14001 | <LOD | 64.57436 | <LOD | 174.9165 | <LOD | 19.46991 | 514.6105 | 39.01722 |
| <LOD | 78.73024 | <LOD | 61.28793 | <LOD | 154.5321 | <LOD | 15.41491 | 515.8148 | 34.34066 |
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| | | | | | | | | | |
| <LOD | 69.15855 | <LOD | 54.04107 | <LOD | 61.24911 | <LOD | 2.184397 | <LOD | 25.32861 |
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| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 21.26939 | 5.159139 | <LOD | 1.999689 | <LOD | 2.017668 | 6.405485 | 0.959995 | <LOD | 388.8174 |
| 20.62811 | 5.1751 | <LOD | 2.17644 | <LOD | 2.171584 | <LOD | 2.66509 | <LOD | 391.741 |
| 49.05517 | 6.23402 | 13.62879 | 1.051264 | <LOD | 2.683905 | 131.8537 | 2.505539 | 5518.189 | 320.4716 |
| 41.73069 | 6.665196 | 25.61757 | 1.450976 | 490.2745 | 7.938207 | 219.8791 | 3.735959 | 10920.27 | 514.8461 |
| 51.69854 | 5.945243 | 41.90953 | 1.49392 | <LOD | 2.333447 | 52.33436 | 1.705624 | 3461.102 | 303.4799 |
| 50.98364 | 6.447343 | 27.7473 | 1.504416 | <LOD | 4.702387 | 78.15852 | 2.217261 | 4996.192 | 425.4426 |
| 37.57358 | 5.816599 | 57.7553 | 1.681875 | <LOD | 2.19712 | 35.21101 | 1.470729 | 3482.111 | 292.2567 |
| 36.87564 | 6.098301 | 36.74006 | 1.606668 | <LOD | 5.127595 | 43.25247 | 1.713556 | 2944.804 | 325.2877 |
| 54.32352 | 5.79607 | 30.76614 | 1.329991 | <LOD | 3.065998 | 75.18961 | 1.935065 | 3327.167 | 299.1097 |
| 26.31621 | 6.223579 | 39.15973 | 1.508688 | <LOD | 2.514128 | 37.22484 | 1.572952 | 4637.055 | 354.1675 |
| 64.51081 | 6.584868 | 20.55191 | 1.473878 | <LOD | 5.875026 | 78.54134 | 2.266192 | 4305.586 | 414.8105 |
| 59.21256 | 6.370357 | 26.18424 | 1.464352 | <LOD | 4.838322 | 64.70216 | 2.017127 | 3483.081 | 380.4255 |
| 56.39717 | 6.190635 | 48.0928 | 1.629562 | <LOD | 2.543296 | 34.97392 | 1.536685 | 3871.109 | 317.3763 |
| 45.37139 | 5.739799 | 50.28622 | 1.55731 | <LOD | 1.90354 | 33.59472 | 1.423475 | 3007.073 | 270.5011 |
| 60.22877 | 6.054253 | 48.25789 | 1.594218 | <LOD | 2.224316 | 35.62105 | 1.510594 | 2649.111 | 277.0363 |
| 65.76701 | 6.502074 | 48.20073 | 1.685155 | <LOD | 2.471134 | 45.71592 | 1.733615 | 3709.086 | 328.8917 |
| 65.14232 | 8.869387 | 58.10332 | 2.430235 | <LOD | 3.270713 | 45.403 | 2.326443 | 5932.753 | 506.5109 |
| 45.13827 | 5.451006 | <LOD | 2.149447 | <LOD | 1.923414 | 8.523391 | 1.028079 | <LOD | 373.8757 |
| 52.26566 | 6.336905 | 15.75593 | 1.103219 | <LOD | 2.45636 | 120.1173 | 2.430597 | 4864.919 | 308.2902 |
| 37.81188 | 6.771011 | 83.72524 | 2.272102 | <LOD | 2.395144 | 57.00331 | 1.986537 | 6348.497 | 439.4317 |
| 47.47845 | 6.887455 | 87.60299 | 2.362617 | <LOD | 2.856349 | 44.36859 | 1.848053 | 6114.459 | 459.7446 |
| 44.88128 | 6.705445 | 55.19863 | 1.827427 | <LOD | 2.414355 | 54.10897 | 1.891335 | 7099.983 | 404.3228 |
| 40.8604 | 6.649698 | 73.89209 | 2.087361 | <LOD | 2.318023 | 56.51653 | 1.928305 | 5086.876 | 394.2573 |
| 39.05413 | 6.825544 | 78.5846 | 2.194232 | <LOD | 2.961264 | 51.07993 | 1.898864 | 6499.536 | 447.3466 |
| 47.01815 | 6.849426 | 82.8336 | 2.277869 | <LOD | 2.57001 | 48.01764 | 1.879624 | 6010.954 | 430.3459 |
| 46.46666 | 6.519694 | 70.52554 | 2.000547 | <LOD | 2.267299 | 53.85218 | 1.853069 | 5337.23 | 381.8608 |
| 55.29662 | 6.465513 | 47.18864 | 1.629492 | <LOD | 2.319387 | 59.76658 | 1.868202 | 5991.355 | 363.013 |
| 41.67963 | 5.42529 | 2.75344 | 0.748347 | <LOD | 1.781101 | 4.757771 | 0.96483 | <LOD | 369.2039 |
| 57.68224 | 6.341199 | 13.4981 | 1.064926 | <LOD | 2.783656 | 128.4504 | 2.515924 | 5147.956 | 322.8933 |

| Zr | Zr +/- |
|---|---|
| 25.26166 | 1.525195 |
| 9.489219 | 1.415369 |
| 438.0994 | 4.801602 |
| 267.0442 | 4.000811 |
| 124.1215 | 2.485947 |
| 75.67007 | 2.364549 |
| 142.9406 | 2.582053 |
| 108.4826 | 2.485253 |
| 94.71674 | 2.237005 |
| 263.1698 | 3.660502 |
| 59.53359 | 2.280477 |
| 82.8863 | 2.365595 |
| 142.6203 | 2.699846 |
| 129.1066 | 2.434623 |
| 124.0697 | 2.498792 |
| 177.72 | 3.083573 |
| 222.3378 | 4.627549 |
| | |
| 16.25594 | 1.513007 |
| 426.555 | 4.789675 |
| 220.5081 | 3.625621 |
| 186.5601 | 3.382461 |
| 273.7456 | 3.969185 |
| 243.503 | 3.725734 |
| 272.1477 | 4.043502 |
| 202.8481 | 3.496543 |
| 231.509 | 3.548503 |
| 301.0688 | 3.99557 |
| | |
| 20.25852 | 1.535947 |
| 402.7373 | 4.621603 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 33.3 | 15-Apr-09 | 9:22:20 | 1 | -0.0305 | | | | |
| 66.54 | 15-Apr-09 | 9:24:17 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 65.93 | 15-Apr-09 | 9:28:04 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 66.95 | 15-Apr-09 | 9:30:35 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 66.62 | 15-Apr-09 | 9:41:49 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 67.98 | 15-Apr-09 | 9:49:20 | 6 | | Ex-situ | | NW-2 | 0-0.5 ft |
| 66.08 | 15-Apr-09 | 9:53:38 | 7 | | Ex-situ | | CA-7 | 0-1 ft |
| 67.79 | 15-Apr-09 | 9:57:14 | 8 | | Ex-situ | | NW-5 | 0-1 ft |
| 65.9 | 15-Apr-09 | 10:32:09 | 9 | | Ex-situ | | CA-12 | 0-1 ft |
| 66.37 | 15-Apr-09 | 10:35:23 | 10 | | Ex-situ | | CA-16 | 0-1 ft |
| 68.63 | 15-Apr-09 | 10:38:31 | 11 | | Ex-situ | | CA-13 | 0-1 ft |
| 65.95 | 15-Apr-09 | 10:42:08 | 12 | | Ex-situ | | CA-15 | 0-1 ft |
| 67.33 | 15-Apr-09 | 10:45:26 | 13 | | Ex-situ | | CA-14 | 0-1 ft |
| 70.65 | 15-Apr-09 | 10:48:40 | 14 | | Ex-situ | | NW-1 | 0-1 ft |
| 68.94 | 15-Apr-09 | 10:51:25 | 15 | | Ex-situ | | NW3 | 0-1 ft |
| 71.47 | 15-Apr-09 | 10:54:11 | 16 | | Ex-situ | | NW-4 | 0-1 ft |
| 71.45 | 15-Apr-09 | 10:57:05 | 17 | | Ex-situ | | NW-6 | 0-1 ft |
| 80.17 | 15-Apr-09 | 11:26:39 | 18 | | Ex-situ | | SSP-SW-10 | 0-1 ft |
| 33.01 | 15-Apr-09 | 12:53:34 | 19 | -0.0307 | | | | |
| 69.86 | 15-Apr-09 | 12:55:29 | 20 | | Ex-situ | Si Blank | | 0-1 ft |
| 68.91 | 15-Apr-09 | 12:58:32 | 21 | | Ex-situ | XRF 250 | | 0-1 ft |
| 70.83 | 15-Apr-09 | 13:39:40 | 22 | | Ex-situ | | SSP-FL-3M | 0-1 ft |
| 71.13 | 15-Apr-09 | 13:43:15 | 23 | | Ex-situ | | SSP-FL-3L | 0-1 ft |
| 72.29 | 15-Apr-09 | 13:46:39 | 24 | | Ex-situ | | SSP-SW-11 | 0-1 ft |
| 71.2 | 15-Apr-09 | 13:49:09 | 25 | | Ex-situ | | SSP-SW-12 | 0-1 ft |
| 70.79 | 15-Apr-09 | 14:21:40 | 26 | | Ex-situ | | SSP-FL-3K | 0-1 ft |
| 70.3 | 15-Apr-09 | 14:24:33 | 27 | | Ex-situ | | SSP-FL-3J | 0-1 ft |
| 70.58 | 15-Apr-09 | 14:27:23 | 28 | | Ex-situ | | SSP-SW-13 | 0-1 ft |
| 70.11 | 15-Apr-09 | 14:30:12 | 29 | | Ex-situ | | SSP-sw-14 | 0-1 ft |
| 0.1 | 15-Apr-09 | 15:09:51 | 30 | 0 | | | | |
| 36.73 | 15-Apr-09 | 15:10:01 | 31 | -0.0297 | | | | |
| 70.27 | 15-Apr-09 | 15:12:08 | 32 | | Ex-situ | Si Blank | | 0-1 ft |
| 69.38 | 15-Apr-09 | 15:15:00 | 33 | | Ex-situ | XRF 250 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 4.722757 | <LOD | 3.158985 | <LOD | 12.29874 | <LOD | 26.71378 | <LOD | 5.636078 |
| 99.34242 | 3.779565 | <LOD | 8.267056 | <LOD | 12.08574 | <LOD | 26.39961 | <LOD | 5.352657 |
| 240.8589 | 6.039036 | <LOD | 13.19611 | <LOD | 14.73572 | <LOD | 32.53536 | 13.06197 | 2.764184 |
| 478.3522 | 10.8479 | 440.8558 | 10.35627 | <LOD | 18.68221 | <LOD | 46.61808 | 17.26339 | 4.012486 |
| 32.61959 | 2.863784 | <LOD | 6.466709 | <LOD | 16.11102 | <LOD | 37.1981 | 81.67545 | 4.60867 |
| 1483.792 | 19.55306 | 61.73356 | 11.81467 | 1303.685 | 23.53812 | <LOD | 49.44704 | 3693.719 | 42.06499 |
| 40.15134 | 2.975802 | <LOD | 6.551301 | <LOD | 16.9875 | <LOD | 34.35506 | 97.054 | 4.862875 |
| 2348.43 | 25.8682 | 43.16863 | 13.89968 | 217.5061 | 9.976323 | <LOD | 40.78711 | 1667.942 | 22.61566 |
| 489.1869 | 8.790109 | 23.88123 | 6.220693 | 347.9345 | 11.04529 | <LOD | 35.4959 | 1700.278 | 21.67633 |
| 98.33329 | 4.302402 | 13.4268 | 3.336861 | 23.11203 | 6.289159 | <LOD | 39.24417 | 165.0356 | 6.386667 |
| 2504.366 | 28.86544 | 101.2884 | 15.43048 | 1000.029 | 20.6367 | <LOD | 51.30743 | 4637.799 | 50.61187 |
| 1764.275 | 21.61504 | 45.30854 | 12.48156 | 920.4854 | 19.05466 | <LOD | 45.64057 | 3328.413 | 38.01823 |
| 85.92661 | 4.051134 | <LOD | 9.014239 | 39.5901 | 6.512354 | <LOD | 35.85724 | 104.4947 | 5.264946 |
| 28.66589 | 2.641443 | <LOD | 6.099975 | <LOD | 15.04378 | <LOD | 31.73768 | 82.14016 | 4.450778 |
| 42.08564 | 3.074872 | <LOD | 6.86001 | <LOD | 16.36949 | <LOD | 32.77689 | 115.5884 | 5.315568 |
| 83.86527 | 4.144423 | <LOD | 9.419102 | 34.05239 | 6.623209 | <LOD | 36.81548 | 170.6617 | 6.670127 |
| 24.52997 | 3.902265 | <LOD | 8.736814 | <LOD | 21.48763 | <LOD | 50.74534 | 47.62028 | 5.445749 |
| <LOD | 4.947252 | <LOD | 3.258898 | <LOD | 12.26507 | <LOD | 25.31496 | <LOD | 5.59449 |
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| 21.18017 | 3.025245 | <LOD | 6.781499 | <LOD | 17.65038 | <LOD | 45.77104 | 85.47474 | 5.290768 |
| 67.65929 | 4.232539 | <LOD | 9.648684 | <LOD | 18.77514 | <LOD | 50.84907 | 90.76102 | 5.533071 |
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| 13.15143 | 2.6851 | <LOD | 6.177514 | <LOD | 17.17296 | <LOD | 42.62902 | 59.99049 | 4.531857 |
| 22.62884 | 3.102895 | <LOD | 6.603634 | <LOD | 16.95304 | <LOD | 46.58302 | 83.35219 | 5.210601 |
| 18.27152 | 2.98044 | <LOD | 6.809313 | <LOD | 16.3005 | <LOD | 44.52235 | 76.05342 | 5.083827 |
| 8.483844 | 2.483368 | <LOD | 5.436522 | <LOD | 16.68553 | <LOD | 39.98388 | 60.17705 | 4.436809 |
| <LOD | 6.628069 | <LOD | 4.765364 | <LOD | 15.22841 | <LOD | 34.2842 | 38.17447 | 3.700159 |
| <LOD | 4.811938 | <LOD | 3.226741 | <LOD | 12.2636 | <LOD | 26.03287 | <LOD | 5.730295 |
| 231.8095 | 6.029437 | <LOD | 13.10607 | <LOD | 15.05724 | <LOD | 31.43901 | <LOD | 7.589895 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.555716 | <LOD | 74.29193 | 260.0255 | 15.56078 | <LOD | 52.63165 | <LOD | 37.86247 |
| <LOD | 5.772767 | <LOD | 73.41508 | <LOD | 24.9913 | <LOD | 62.82001 | 112.4849 | 12.80192 |
| <LOD | 7.212423 | <LOD | 73.89903 | 5614.689 | 75.34348 | <LOD | 74.98116 | <LOD | 39.11159 |
| 481.1884 | 12.50836 | <LOD | 82.49783 | 34184.85 | 331.1612 | 515.432 | 52.59666 | 363.5174 | 15.97617 |
| <LOD | 6.611857 | <LOD | 77.47896 | 19598.14 | 190.9619 | <LOD | 81.62344 | <LOD | 40.53339 |
| <LOD | 12.90811 | <LOD | 81.06055 | 32069.69 | 313.478 | 321.0155 | 48.81157 | <LOD | 43.5929 |
| <LOD | 6.665996 | <LOD | 76.49217 | 14672.24 | 150.0256 | <LOD | 76.09486 | <LOD | 39.92457 |
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| <LOD | 8.220603 | <LOD | 71.2856 | 18710 | 179.876 | 107.3963 | 33.7541 | <LOD | 38.71606 |
| <LOD | 7.41017 | <LOD | 79.59451 | 25684.92 | 245.9423 | <LOD | 97.2818 | <LOD | 42.07546 |
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| <LOD | 12.37995 | <LOD | 75.76183 | 30530.35 | 294.1212 | <LOD | 120.1188 | <LOD | 41.86815 |
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| <LOD | 7.376706 | <LOD | 72.90236 | 5446.889 | 75.0789 | <LOD | 79.33951 | <LOD | 39.70934 |
| <LOD | 8.181605 | <LOD | 84.33688 | 38172.91 | 376.1635 | <LOD | 112.1517 | <LOD | 45.98279 |
| <LOD | 7.794003 | <LOD | 83.75621 | 52052.02 | 504.4066 | <LOD | 130.8741 | <LOD | 46.40719 |
| <LOD | 7.439293 | <LOD | 80.80617 | 20682.92 | 217.9569 | <LOD | 99.7785 | <LOD | 44.11578 |
| <LOD | 7.323092 | <LOD | 81.23407 | 29546.12 | 293.7535 | <LOD | 105.7032 | <LOD | 44.75631 |
| <LOD | 7.630518 | <LOD | 81.68192 | 44394.75 | 427.4063 | <LOD | 123.3722 | <LOD | 45.34078 |
| <LOD | 7.049313 | <LOD | 83.36717 | 41263.68 | 406.2169 | <LOD | 121.125 | <LOD | 45.86686 |
| <LOD | 6.873397 | <LOD | 80.21687 | 28282.31 | 277.1021 | <LOD | 97.01447 | <LOD | 44.1084 |
| <LOD | 7.048941 | <LOD | 79.33606 | 14829.75 | 159.3034 | <LOD | 82.60019 | <LOD | 42.87262 |
| <LOD | 5.520222 | <LOD | 71.19073 | 351.1006 | 17.81719 | <LOD | 45.53587 | <LOD | 38.48932 |
| <LOD | 6.889068 | <LOD | 73.01381 | 5245.375 | 73.39906 | <LOD | 71.3297 | <LOD | 39.83457 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 70.41023 | <LOD | 52.59676 | <LOD | 66.77129 | <LOD | 2.033286 | <LOD | 27.90139 |
| <LOD | 70.14862 | <LOD | 53.9147 | <LOD | 69.14361 | <LOD | 1.547037 | <LOD | 28.43317 |
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| <LOD | 80.21055 | 286.8967 | 22.37721 | <LOD | 201.6215 | 27.88494 | 5.796912 | <LOD | 86.01175 |
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| <LOD | 82.58704 | <LOD | 64.26949 | <LOD | 179.3057 | 26.3241 | 6.261617 | 561.9381 | 38.85036 |
| <LOD | 83.09967 | <LOD | 64.93713 | <LOD | 192.5055 | <LOD | 22.01637 | 1279.391 | 53.02702 |
| <LOD | 78.74097 | <LOD | 61.92384 | <LOD | 152.1459 | <LOD | 13.49705 | 697.7642 | 36.76188 |
| <LOD | 80.37802 | <LOD | 62.40017 | <LOD | 163.4911 | <LOD | 15.9371 | 620.7615 | 37.28199 |
| <LOD | 80.14353 | <LOD | 63.38445 | <LOD | 183.9086 | <LOD | 19.84747 | 458.2239 | 38.23996 |
| <LOD | 82.14001 | <LOD | 64.57436 | <LOD | 174.9165 | <LOD | 19.46991 | 514.6105 | 39.01722 |
| <LOD | 78.73024 | <LOD | 61.28793 | <LOD | 154.5321 | <LOD | 15.41491 | 515.8148 | 34.34066 |
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| <LOD | 69.15855 | <LOD | 54.04107 | <LOD | 61.24911 | <LOD | 2.184397 | <LOD | 25.32861 |
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| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 21.26939 | 5.159139 | <LOD | 1.999689 | <LOD | 2.017668 | 6.405485 | 0.959995 | <LOD | 388.8174 |
| 20.62811 | 5.1751 | <LOD | 2.17644 | <LOD | 2.171584 | <LOD | 2.66509 | <LOD | 391.741 |
| 49.05517 | 6.23402 | 13.62879 | 1.051264 | <LOD | 2.683905 | 131.8537 | 2.505539 | 5518.189 | 320.4716 |
| 41.73069 | 6.665196 | 25.61757 | 1.450976 | 490.2745 | 7.938207 | 219.8791 | 3.735959 | 10920.27 | 514.8461 |
| 51.69854 | 5.945243 | 41.90953 | 1.49392 | <LOD | 2.333447 | 52.33436 | 1.705624 | 3461.102 | 303.4799 |
| 50.98364 | 6.447343 | 27.7473 | 1.504416 | <LOD | 4.702387 | 78.15852 | 2.217261 | 4996.192 | 425.4426 |
| 37.57358 | 5.816599 | 57.7553 | 1.681875 | <LOD | 2.19712 | 35.21101 | 1.470729 | 3482.111 | 292.2567 |
| 36.87564 | 6.098301 | 36.74006 | 1.606668 | <LOD | 5.127595 | 43.25247 | 1.713556 | 2944.804 | 325.2877 |
| 54.32352 | 5.79607 | 30.76614 | 1.329991 | <LOD | 3.065998 | 75.18961 | 1.935065 | 3327.167 | 299.1097 |
| 26.31621 | 6.223579 | 39.15973 | 1.508688 | <LOD | 2.514128 | 37.22484 | 1.572952 | 4637.055 | 354.1675 |
| 64.51081 | 6.584868 | 20.55191 | 1.473878 | <LOD | 5.875026 | 78.54134 | 2.266192 | 4305.586 | 414.8105 |
| 59.21256 | 6.370357 | 26.18424 | 1.464352 | <LOD | 4.838322 | 64.70216 | 2.017127 | 3483.081 | 380.4255 |
| 56.39717 | 6.190635 | 48.0928 | 1.629562 | <LOD | 2.543296 | 34.97392 | 1.536685 | 3871.109 | 317.3763 |
| 45.37139 | 5.739799 | 50.28622 | 1.55731 | <LOD | 1.90354 | 33.59472 | 1.423475 | 3007.073 | 270.5011 |
| 60.22877 | 6.054253 | 48.25789 | 1.594218 | <LOD | 2.224316 | 35.62105 | 1.510594 | 2649.111 | 277.0363 |
| 65.76701 | 6.502074 | 48.20073 | 1.685155 | <LOD | 2.471134 | 45.71592 | 1.733615 | 3709.086 | 328.8917 |
| 65.14232 | 8.869387 | 58.10332 | 2.430235 | <LOD | 3.270713 | 45.403 | 2.326443 | 5932.753 | 506.5109 |
| 45.13827 | 5.451006 | <LOD | 2.149447 | <LOD | 1.923414 | 8.523391 | 1.028079 | <LOD | 373.8757 |
| 52.26566 | 6.336905 | 15.75593 | 1.103219 | <LOD | 2.45636 | 120.1173 | 2.430597 | 4864.919 | 308.2902 |
| 37.81188 | 6.771011 | 83.72524 | 2.272102 | <LOD | 2.395144 | 57.00331 | 1.986537 | 6348.497 | 439.4317 |
| 47.47845 | 6.887455 | 87.60299 | 2.362617 | <LOD | 2.856349 | 44.36859 | 1.848053 | 6114.459 | 459.7446 |
| 44.88128 | 6.705445 | 55.19863 | 1.827427 | <LOD | 2.414355 | 54.10897 | 1.891335 | 7099.983 | 404.3228 |
| 40.8604 | 6.649698 | 73.89209 | 2.087361 | <LOD | 2.318023 | 56.51653 | 1.928305 | 5086.876 | 394.2573 |
| 39.05413 | 6.825544 | 78.5846 | 2.194232 | <LOD | 2.961264 | 51.07993 | 1.898864 | 6499.536 | 447.3466 |
| 47.01815 | 6.849426 | 82.8336 | 2.277869 | <LOD | 2.57001 | 48.01764 | 1.879624 | 6010.954 | 430.3459 |
| 46.46666 | 6.519694 | 70.52554 | 2.000547 | <LOD | 2.267299 | 53.85218 | 1.853069 | 5337.23 | 381.8608 |
| 55.29662 | 6.465513 | 47.18864 | 1.629492 | <LOD | 2.319387 | 59.76658 | 1.868202 | 5991.355 | 363.013 |
| 41.67963 | 5.42529 | 2.75344 | 0.748347 | <LOD | 1.781101 | 4.757771 | 0.96483 | <LOD | 369.2039 |
| 57.68224 | 6.341199 | 13.4981 | 1.064926 | <LOD | 2.783656 | 128.4504 | 2.515924 | 5147.956 | 322.8933 |

| Zr | Zr +/- |
|---|---|
| 25.26166 | 1.525195 |
| 9.489219 | 1.415369 |
| 438.0994 | 4.801602 |
| 267.0442 | 4.000811 |
| 124.1215 | 2.485947 |
| 75.67007 | 2.364549 |
| 142.9406 | 2.582053 |
| 108.4826 | 2.485253 |
| 94.71674 | 2.237005 |
| 263.1698 | 3.660502 |
| 59.53359 | 2.280477 |
| 82.8863 | 2.365595 |
| 142.6203 | 2.699846 |
| 129.1066 | 2.434623 |
| 124.0697 | 2.498792 |
| 177.72 | 3.083573 |
| 222.3378 | 4.627549 |
| | |
| 16.25594 | 1.513007 |
| 426.555 | 4.789675 |
| 220.5081 | 3.625621 |
| 186.5601 | 3.382461 |
| 273.7456 | 3.969185 |
| 243.503 | 3.725734 |
| 272.1477 | 4.043502 |
| 202.8481 | 3.496543 |
| 231.509 | 3.548503 |
| 301.0688 | 3.99557 |
| | |
| 20.25852 | 1.535947 |
| 402.7373 | 4.621603 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 34.12 | 17-Apr-09 | 9:20:26 | 1 | -0.0114 | | | | |
| 67.99 | 17-Apr-09 | 9:24:39 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 69.3 | 17-Apr-09 | 9:29:22 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 69.02 | 17-Apr-09 | 9:34:31 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 66.75 | 17-Apr-09 | 9:38:20 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 67.64 | 17-Apr-09 | 9:49:11 | 6 | | Ex-situ | | SSP-FL-1M | 0-1 ft |
| 74.23 | 17-Apr-09 | 9:53:12 | 7 | | Ex-situ | | SSP-FL-2M | 0-1 ft |
| 70.05 | 17-Apr-09 | 10:05:30 | 8 | | Ex-situ | | SSP-BANK- | 0-0.5ft |
| 68.46 | 17-Apr-09 | 10:08:37 | 9 | | Ex-situ | | SSP-BANK- | 0-0.5 ft |
| 68.93 | 17-Apr-09 | 10:12:07 | 10 | | Ex-situ | | SSP-BANK- | 0-0.5 ft |
| 67.54 | 17-Apr-09 | 10:45:45 | 11 | | Ex-situ | | NSP-FL-2G | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.243146 | <LOD | 3.408191 | <LOD | 13.06108 | <LOD | 27.07105 | <LOD | 5.728127 |
| 94.19081 | 3.760195 | <LOD | 8.177183 | <LOD | 12.77829 | <LOD | 25.45531 | <LOD | 5.639467 |
| 238.8823 | 6.144318 | <LOD | 13.30574 | <LOD | 14.77298 | <LOD | 34.1218 | 9.975835 | 2.720494 |
| 469.7523 | 10.7827 | 413.6776 | 10.14038 | <LOD | 18.84283 | <LOD | 47.29322 | 21.18587 | 4.125233 |
| 13.08306 | 2.661907 | <LOD | 5.928522 | <LOD | 17.96841 | <LOD | 45.21056 | 69.65048 | 4.671546 |
| 22.40356 | 3.311256 | <LOD | 7.209456 | <LOD | 20.07536 | <LOD | 48.28012 | 70.34749 | 5.347856 |
| 134.765 | 5.067579 | <LOD | 11.27452 | <LOD | 16.83259 | <LOD | 38.37732 | 56.96199 | 4.338767 |
| 30.07274 | 2.890853 | <LOD | 6.219835 | <LOD | 15.15575 | <LOD | 35.87515 | 46.01885 | 3.857471 |
| 131.7523 | 4.893788 | <LOD | 10.66366 | <LOD | 16.89748 | <LOD | 35.78853 | 51.89649 | 4.117898 |
| 8.530069 | 2.495628 | <LOD | 5.404259 | <LOD | 17.21326 | <LOD | 44.01486 | 42.04856 | 3.964345 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.707659 | <LOD | 73.73673 | 901.9503 | 26.39988 | <LOD | 46.9326 | <LOD | 38.35543 |
| <LOD | 5.912332 | <LOD | 71.45313 | <LOD | 26.3421 | <LOD | 63.32727 | 72.86767 | 12.95793 |
| <LOD | 8.028926 | <LOD | 73.92616 | 5936.922 | 79.83199 | <LOD | 75.72402 | <LOD | 40.21699 |
| 474.4372 | 12.44755 | 128.3655 | 28.06357 | 33516.76 | 326.5287 | 447.0947 | 51.23571 | 365.9461 | 16.10696 |
| <LOD | 7.029224 | <LOD | 82.45504 | 39517.21 | 365.7307 | <LOD | 116.3308 | <LOD | 43.38989 |
| <LOD | 8.587114 | <LOD | 93.12917 | 38620.58 | 412.4218 | <LOD | 127.2033 | <LOD | 49.17606 |
| <LOD | 7.10572 | <LOD | 81.7222 | 20938.59 | 215.1203 | <LOD | 94.81298 | <LOD | 43.40878 |
| <LOD | 7.090917 | <LOD | 78.4066 | 17341.64 | 177.1539 | <LOD | 83.29431 | <LOD | 41.45802 |
| <LOD | 7.134656 | <LOD | 80.73837 | 17966.44 | 185.8705 | <LOD | 85.2138 | <LOD | 42.72895 |
| <LOD | 7.270396 | <LOD | 85.52747 | 34078.59 | 321.1977 | <LOD | 108.0826 | <LOD | 43.79856 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 70.7117 | <LOD | 53.56373 | <LOD | 65.9632 | <LOD | 2.882984 | <LOD | 30.98092 |
| <LOD | 69.19211 | <LOD | 54.50797 | <LOD | 67.95613 | <LOD | 1.543221 | <LOD | 27.75144 |
| <LOD | 72.48025 | <LOD | 56.62327 | <LOD | 123.7299 | <LOD | 6.752856 | <LOD | 43.26902 |
| <LOD | 82.09006 | 302.8904 | 22.49928 | <LOD | 199.4311 | 28.62848 | 5.765401 | <LOD | 85.62555 |
| <LOD | 79.70326 | <LOD | 60.72669 | <LOD | 178.3317 | <LOD | 17.88093 | 408.0592 | 34.73518 |
| <LOD | 90.00777 | <LOD | 69.35455 | <LOD | 197.956 | <LOD | 20.23076 | <LOD | 94.39629 |
| <LOD | 79.54061 | <LOD | 60.95901 | <LOD | 149.0856 | <LOD | 13.15449 | 241.5721 | 27.47909 |
| <LOD | 75.56014 | <LOD | 58.2206 | <LOD | 133.5889 | <LOD | 11.655 | 405.1414 | 28.5547 |
| <LOD | 77.77832 | <LOD | 59.57706 | <LOD | 134.824 | <LOD | 12.08336 | 312.2543 | 27.43544 |
| <LOD | 81.66882 | <LOD | 61.13562 | <LOD | 169.7235 | 19.24428 | 5.576571 | 381.7954 | 33.04764 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 36.27752 | 5.334909 | <LOD | 2.011918 | <LOD | 1.960737 | 5.714708 | 0.969257 | <LOD | 379.7686 |
| 45.20257 | 5.387732 | <LOD | 2.148237 | <LOD | 2.331316 | 4.934118 | 0.963921 | <LOD | 371.0222 |
| 50.32492 | 6.338904 | 14.44896 | 1.087602 | <LOD | 2.700157 | 126.8327 | 2.511758 | 5286.933 | 324.1933 |
| 43.96476 | 6.690083 | 22.93699 | 1.408635 | 486.6641 | 7.922629 | 211.7683 | 3.667508 | 9568.419 | 497.5674 |
| 43.19416 | 6.493726 | 75.68324 | 2.050168 | <LOD | 2.430309 | 65.35306 | 1.979264 | 6384.862 | 428.3944 |
| 45.98835 | 7.355029 | 69.21444 | 2.247872 | <LOD | 2.722654 | 50.23169 | 2.052736 | 6365.654 | 480.869 |
| 40.68666 | 6.552645 | 54.10874 | 1.781096 | <LOD | 2.758939 | 60.06525 | 1.927979 | 4667.651 | 363.178 |
| 35.58609 | 6.213279 | 51.3091 | 1.663513 | <LOD | 2.408085 | 74.4007 | 2.009872 | 5370.729 | 344.5584 |
| 54.42156 | 6.50392 | 50.08215 | 1.685742 | <LOD | 2.452239 | 61.07436 | 1.896185 | 4965.917 | 343.9895 |
| 34.84278 | 6.37664 | 54.34988 | 1.767721 | <LOD | 2.471316 | 80.39919 | 2.152331 | 5993.334 | 410.7958 |

| Zr | Zr +/- |
|---|---|
| 21.03482 | 1.52462 |
| 9.399364 | 1.443863 |
| 407.3024 | 4.674858 |
| 263.1072 | 3.975929 |
| 270.9687 | 3.837481 |
| 194.876 | 3.685135 |
| 285.5404 | 3.982849 |
| 265.4513 | 3.66289 |
| 308.0615 | 4.071704 |
| 227.7108 | 3.492951 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 29.68 | 21-Apr-09 | 8:35:58 | 1 | -0.0298 | | | | |
| 65.15 | 21-Apr-09 | 8:38:23 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 65.19 | 21-Apr-09 | 8:41:17 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 68.77 | 21-Apr-09 | 8:43:51 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 64.41 | 21-Apr-09 | 8:48:15 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 65.63 | 21-Apr-09 | 8:53:44 | 6 | | Ex-situ | | NSP-FL-2F | 0-1 ft |
| 40.05 | 21-Apr-09 | 8:58:23 | 7 | | Ex-situ | | NSP-FL-2E | 0-1 ft |
| 67.08 | 21-Apr-09 | 9:01:33 | 8 | | Ex-situ | | NSP-FL-2D | 0-1 ft |
| 66.63 | 21-Apr-09 | 9:04:16 | 9 | | Ex-situ | | NSP-FL-2D | 0-1 ft |
| 66.81 | 21-Apr-09 | 9:06:57 | 10 | | Ex-situ | | NSP-FL-2D | 0-1 ft |
| 68.39 | 21-Apr-09 | 9:11:16 | 11 | | Ex-situ | | SSP-FL-2L | 0-1 ft |
| 69.26 | 21-Apr-09 | 9:14:29 | 12 | | Ex-situ | | SSP-FL-1L | 0-1 ft |
| 69.72 | 21-Apr-09 | 9:19:35 | 13 | | Ex-situ | | SSP-FL-2K | 0-1 ft |
| 66.21 | 21-Apr-09 | 9:23:25 | 14 | | Ex-situ | | SSP-FL-1K | 0-1 ft |
| 7.96 | 21-Apr-09 | 9:30:30 | 15 | | Ex-situ | | SSP-FL-2J | 0-1 ft |
| 68.12 | 21-Apr-09 | 9:33:11 | 16 | | Ex-situ | | SSP-FL-2J (I | 0-1 ft |
| 67.67 | 21-Apr-09 | 9:36:43 | 17 | | Ex-situ | | NSP-FL-4E | 0-1 ft |
| 65.76 | 21-Apr-09 | 9:41:25 | 18 | | Ex-situ | | SSP-SW-16 | 0-1 ft |
| 65.91 | 21-Apr-09 | 9:44:21 | 19 | | Ex-situ | | SSP-SW-15 | 0-1 ft |
| 63.52 | 21-Apr-09 | 9:48:23 | 20 | | Ex-situ | | SSP-SW-17 | 0-1 ft |
| 33.32 | 21-Apr-09 | 10:20:04 | 21 | -0.0277 | | | | |
| 66.5 | 21-Apr-09 | 10:23:02 | 22 | | Ex-situ | Si Blank | | 0-1 ft |
| 66.39 | 21-Apr-09 | 10:26:13 | 23 | | Ex-situ | XRF 250 | | 0-1 ft |
| 67.38 | 21-Apr-09 | 10:29:56 | 24 | | Ex-situ | | SSP-FL-1C | 0-1 ft |
| 67.5 | 21-Apr-09 | 10:34:10 | 25 | | Ex-situ | | SSP-FL-1D | 0-1 ft |
| 65 | 21-Apr-09 | 10:38:40 | 26 | | Ex-situ | | SSP-FL-2B | 0-1 ft |
| 64.15 | 21-Apr-09 | 10:44:20 | 27 | | Ex-situ | | SSP-FL-2C | 0-1 ft |
| 33.93 | 21-Apr-09 | 10:57:03 | 28 | -0.0288 | | | | |
| 67.15 | 21-Apr-09 | 10:59:42 | 29 | | Ex-situ | Si Blank | | 0-1 ft |
| 67.03 | 21-Apr-09 | 11:02:29 | 30 | | Ex-situ | | SSP-FL-2C ( | 0-1 ft |
| 63.72 | 21-Apr-09 | 11:07:04 | 31 | | Ex-situ | | SSP-FL-2C ( | 0-1 ft |
| 63.4 | 21-Apr-09 | 11:11:04 | 32 | | Ex-situ | | SSP-FL-2C ( | 0-1 ft |
| 65.02 | 21-Apr-09 | 11:14:38 | 33 | | Ex-situ | | SSP-FL-2D | 0-1 ft |
| 61.77 | 21-Apr-09 | 11:18:32 | 34 | | Ex-situ | | SSP-FL-3B | 0-1 ft |
| 67.18 | 21-Apr-09 | 11:21:56 | 35 | | Ex-situ | | SSP-FL-2C-I | 0-1 ft |
| 64.56 | 21-Apr-09 | 11:25:17 | 36 | | Ex-situ | | SSP-FL-2c-\ | 0-1 ft |
| 63.24 | 21-Apr-09 | 11:28:38 | 37 | | Ex-situ | | SSP-FL-2C-S | 0-1 ft |
| 65.76 | 21-Apr-09 | 11:31:43 | 38 | | Ex-situ | | SSP-FL-2C-I | 0-1 ft |
| 66.22 | 21-Apr-09 | 11:38:03 | 39 | | Ex-situ | | SSP-FL-2C-I | 0-1 ft |
| 64.75 | 21-Apr-09 | 11:41:22 | 40 | | Ex-situ | | SSP-FL-4A | 0-1 ft |
| 63.89 | 21-Apr-09 | 11:44:51 | 41 | | Ex-situ | | SSP-FL-4B | 0-1 ft |
| 64.74 | 21-Apr-09 | 13:11:08 | 42 | | Ex-situ | | SSP-FL-3C | 0-1 ft |
| 63.7 | 21-Apr-09 | 13:14:21 | 43 | | Ex-situ | | SSP-FL-3E | 0-1 ft |
| 64.7 | 21-Apr-09 | 13:18:19 | 44 | | Ex-situ | | SSP-FL-2F | 0-1 ft |
| 64.55 | 21-Apr-09 | 13:21:25 | 45 | | Ex-situ | | SSP-FL-3D | 0-1 ft |
| 66.87 | 21-Apr-09 | 13:24:59 | 46 | | Ex-situ | | SSP-FL-2C-S | 1-2 ft |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 66.43 | 21-Apr-09 | 13:30:22 | 47 | | Ex-situ | SSP-FL-2C-I | 1-2 ft |
| 64.47 | 21-Apr-09 | 13:34:20 | 48 | | Ex-situ | SSP-FL-2c | 1-2 ft |
| 65.45 | 21-Apr-09 | 13:41:46 | 49 | | Ex-situ | SSP-FL-3E-I | 0-1 ft |
| 67.31 | 21-Apr-09 | 13:45:02 | 50 | | Ex-situ | SSP-FL-3E-S | 0-1 ft |
| 64.62 | 21-Apr-09 | 13:47:48 | 51 | | Ex-situ | SSP-FL-3E-I | 0-1 ft |
| 64.11 | 21-Apr-09 | 13:50:28 | 52 | | Ex-situ | SSP-FL-3E-V | 0-1 ft |
| 64.65 | 21-Apr-09 | 14:12:04 | 53 | | Ex-situ | SSP-FL-3E | 1-2 ft |
| 61.92 | 21-Apr-09 | 14:15:36 | 54 | | Ex-situ | SSP-FL-3I | 0-1 ft |
| 63.86 | 21-Apr-09 | 14:18:37 | 55 | | Ex-situ | SSP-FL-3G | 0-1 ft |
| 66.02 | 21-Apr-09 | 14:21:39 | 56 | | Ex-situ | SSP-FL-3G | 0-1 ft |
| 68.08 | 21-Apr-09 | 14:40:06 | 57 | | Ex-situ | SSP-SW-19 | 0-1 ft |
| 67.53 | 21-Apr-09 | 14:43:36 | 58 | | Ex-situ | SSP-SW-18 | 0-1 ft |
| 66.46 | 21-Apr-09 | 14:52:18 | 59 | | Ex-situ | SSP-FL-2E | 0-1 ft |
| 67.5 | 21-Apr-09 | 14:56:00 | 60 | | Ex-situ | SSP-FL-1E | 0-1 ft |
| 64.85 | 21-Apr-09 | 15:17:19 | 61 | | Ex-situ | SSP-FL-2F | 0-1 ft |
| 32.85 | 21-Apr-09 | 15:23:07 | 62 | -0.0292 | | | |
| 63.76 | 21-Apr-09 | 15:25:06 | 63 | | Ex-situ | SSP-FL-2G | 0-1 ft |
| 64.28 | 21-Apr-09 | 15:28:38 | 64 | | Ex-situ | SSP-FL-2H | 0-1 ft |
| 66.24 | 21-Apr-09 | 15:32:03 | 65 | | Ex-situ | SSP-FL-2I | 0-1 ft |
| 63.76 | 21-Apr-09 | 15:34:56 | 66 | | Ex-situ | SSP-FL-1I | 0-1 ft |
| 69.51 | 21-Apr-09 | 15:37:44 | 67 | | Ex-situ | SSP-FL-1J | 0-1 ft |
| 65.85 | 21-Apr-09 | 15:40:27 | 68 | | Ex-situ | SSP-SW-20 | 0-1 ft |
| 66.14 | 21-Apr-09 | 15:43:07 | 69 | | Ex-situ | SSP-SW-21 | 0-1 ft |
| 63.06 | 21-Apr-09 | 15:45:46 | 70 | | Ex-situ | SSP-SW-22 | 0-1 ft |
| 66.03 | 21-Apr-09 | 15:48:13 | 71 | | Ex-situ | SSP-SW-23 | 0-1 ft |
| 33.1 | 21-Apr-09 | 15:50:52 | 72 | -0.0266 | | | |
| 65.56 | 21-Apr-09 | 15:52:38 | 73 | | Ex-situ | NSP-FL-1A | 0-1 ft |
| 64.75 | 21-Apr-09 | 15:55:51 | 74 | | Ex-situ | NSP-FL-1A | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.042456 | <LOD | 3.441524 | <LOD | 12.92514 | <LOD | 28.61377 | <LOD | 5.461757 |
| 98.1746 | 3.733781 | <LOD | 8.161436 | <LOD | 12.94277 | <LOD | 27.70145 | <LOD | 5.794088 |
| 295.2176 | 6.856087 | <LOD | 14.66746 | <LOD | 16.73599 | <LOD | 34.37875 | 20.76231 | 3.114588 |
| 485.65 | 10.86355 | 444.3321 | 10.32132 | <LOD | 18.48969 | <LOD | 48.10514 | 22.72635 | 4.155075 |
| 8.463195 | 2.437968 | <LOD | 5.184686 | <LOD | 16.94304 | <LOD | 44.83264 | 43.37194 | 3.919803 |
| 24.10548 | 3.765083 | <LOD | 8.045491 | <LOD | 23.73767 | <LOD | 59.0601 | 45.17986 | 5.267021 |
| 230.2577 | 6.490514 | <LOD | 13.95062 | 72.53037 | 7.706849 | <LOD | 46.29498 | 64.57214 | 4.677178 |
| 239.7495 | 6.725929 | <LOD | 14.29152 | 98.24636 | 8.293514 | <LOD | 45.54538 | 64.5256 | 4.783776 |
| 222.8976 | 6.462706 | <LOD | 14.1425 | 71.08814 | 7.745874 | <LOD | 45.81475 | 67.76977 | 4.801863 |
| 15.83115 | 2.886148 | <LOD | 6.384377 | <LOD | 18.2786 | <LOD | 48.55597 | 77.6511 | 5.060184 |
| 19.30335 | 3.058004 | <LOD | 6.503815 | <LOD | 19.08018 | <LOD | 48.97668 | 57.66331 | 4.700952 |
| 12.56142 | 2.832197 | <LOD | 6.090671 | <LOD | 19.66058 | <LOD | 48.08307 | 78.36493 | 5.198141 |
| 11.16412 | 2.681004 | <LOD | 5.838909 | <LOD | 18.75811 | <LOD | 46.80954 | 65.01811 | 4.651356 |
| <LOD | 25.12194 | <LOD | 18.77195 | <LOD | 53.47738 | <LOD | 136.0852 | 79.40752 | 14.43623 |
| 52.27182 | 3.703739 | <LOD | 8.530314 | 30.69984 | 7.043494 | <LOD | 46.88516 | 83.86091 | 5.189345 |
| 159.2377 | 5.549668 | <LOD | 12.29222 | 124.0951 | 8.748596 | <LOD | 45.46178 | 60.245 | 4.698312 |
| 22.16987 | 2.877733 | <LOD | 6.415336 | <LOD | 17.96732 | <LOD | 44.48655 | 70.755 | 4.654426 |
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| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
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| <LOD | 5.836312 | <LOD | 74.81517 | 253.1842 | 15.3531 | <LOD | 52.41594 | <LOD | 37.61518 |
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| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
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| <LOD | 81.82573 | <LOD | 60.08834 | <LOD | 191.5278 | <LOD | 20.9822 | 2104.525 | 59.61133 |
| <LOD | 83.17388 | <LOD | 62.10919 | <LOD | 181.5343 | 25.5234 | 6.110914 | 327.4116 | 34.03209 |
| <LOD | 79.83238 | <LOD | 59.61577 | <LOD | 174.3849 | 29.35221 | 6.090475 | <LOD | 87.06654 |
| <LOD | 81.63846 | <LOD | 59.81484 | <LOD | 184.3358 | 54.68996 | 6.480565 | 201.8219 | 32.04071 |
| <LOD | 82.60743 | <LOD | 61.44847 | <LOD | 174.4582 | 22.54841 | 6.005852 | 296.4297 | 32.99146 |
| <LOD | 82.6558 | <LOD | 61.79882 | <LOD | 183.3653 | 32.37445 | 6.134246 | 608.1775 | 38.5659 |
| <LOD | 83.35418 | <LOD | 60.92838 | <LOD | 177.2138 | 20.12055 | 5.791738 | 730.1301 | 39.38553 |
| <LOD | 81.45839 | <LOD | 59.89567 | <LOD | 183.3638 | <LOD | 18.06675 | 642.3078 | 38.22384 |
| <LOD | 83.30905 | <LOD | 61.11966 | <LOD | 182.1913 | <LOD | 18.12439 | 157.5087 | 30.31132 |
| <LOD | 83.43448 | <LOD | 61.34068 | <LOD | 189.6445 | 35.72009 | 6.79492 | <LOD | 94.16887 |
| <LOD | 78.6331 | <LOD | 58.43286 | <LOD | 156.5481 | 22.71657 | 4.674079 | 149.6492 | 25.54382 |
| <LOD | 80.77087 | <LOD | 59.79038 | <LOD | 171.1877 | <LOD | 16.51788 | 106.2177 | 27.62433 |
| <LOD | 84.17822 | <LOD | 62.89315 | <LOD | 192.6093 | 30.71267 | 6.472299 | 165.9442 | 32.15704 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| <LOD | 85.20775 | <LOD | 63.05441 | <LOD | 188.4995 | 29.9551 | 6.672707 | 165.6391 | 32.73245 |
| <LOD | 83.23326 | <LOD | 61.09457 | <LOD | 184.6666 | 22.00001 | 6.339341 | <LOD | 87.21335 |
| <LOD | 82.28611 | <LOD | 60.76398 | <LOD | 172.0233 | 28.59302 | 5.9167 | 247.6798 | 31.54925 |
| <LOD | 86.42079 | <LOD | 63.63602 | <LOD | 194.3836 | 26.67845 | 6.655622 | 246.8646 | 34.47843 |
| <LOD | 80.44972 | <LOD | 58.88666 | <LOD | 161.3435 | <LOD | 13.87828 | 101.304 | 24.80772 |
| <LOD | 78.37805 | <LOD | 57.98789 | <LOD | 158.8878 | <LOD | 15.88105 | 172.2151 | 28.04758 |
| <LOD | 82.17555 | <LOD | 60.58924 | <LOD | 188.7341 | 29.39267 | 6.160589 | 315.2576 | 33.44185 |
| <LOD | 78.37518 | <LOD | 57.70085 | <LOD | 170.1459 | 48.87685 | 5.958142 | 543.9835 | 35.49302 |
| <LOD | 82.56169 | <LOD | 60.31043 | <LOD | 179.7204 | 26.10908 | 5.895089 | 210.7381 | 30.69757 |
| <LOD | 83.42679 | <LOD | 61.47501 | <LOD | 172.906 | 31.79345 | 6.03136 | 173.439 | 30.37236 |
| <LOD | 84.54342 | <LOD | 62.0079 | <LOD | 161.5241 | 17.9042 | 4.803906 | 148.9027 | 26.59026 |
| <LOD | 85.43475 | <LOD | 62.59063 | <LOD | 165.4558 | 19.40352 | 5.187408 | 272.2567 | 30.41423 |
| <LOD | 83.11785 | <LOD | 61.39098 | <LOD | 178.6172 | 31.10832 | 5.354673 | 815.7867 | 39.62578 |
| <LOD | 81.82632 | <LOD | 60.48771 | <LOD | 159.0609 | 13.75488 | 4.314682 | 608.9496 | 34.01683 |
| <LOD | 77.99507 | <LOD | 57.78841 | <LOD | 153.5144 | 21.48889 | 4.371463 | 297.2541 | 27.54149 |
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| <LOD | 79.83275 | <LOD | 58.38958 | <LOD | 161.7227 | 22.07606 | 4.787174 | 410.7603 | 30.70269 |
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| <LOD | 84.19489 | <LOD | 61.74267 | <LOD | 172.7412 | <LOD | 17.84214 | 127.3709 | 29.50166 |
| <LOD | 84.10925 | <LOD | 61.37061 | <LOD | 183.7548 | 26.46372 | 6.672305 | 127.0932 | 32.10889 |
| <LOD | 89.81545 | <LOD | 66.01463 | <LOD | 184.8867 | 30.98471 | 6.522163 | 634.8475 | 41.5623 |
| <LOD | 82.36986 | <LOD | 60.95533 | <LOD | 172.5824 | <LOD | 17.45593 | 613.8527 | 37.71811 |
| <LOD | 81.64591 | <LOD | 60.86228 | <LOD | 178.9476 | 26.90232 | 6.053401 | 334.2481 | 33.43195 |
| <LOD | 79.93622 | <LOD | 58.9594 | <LOD | 176.9464 | 21.32054 | 5.928653 | 202.9599 | 30.60471 |
| <LOD | 82.20577 | <LOD | 61.12751 | <LOD | 184.3464 | <LOD | 18.56014 | 182.5861 | 31.57817 |
| | | | | | | | | | |
| <LOD | 70.79015 | <LOD | 52.57089 | <LOD | 66.12734 | <LOD | 1.972553 | <LOD | 30.23434 |
| <LOD | 71.77943 | <LOD | 54.40838 | <LOD | 118.695 | <LOD | 6.218781 | <LOD | 42.18838 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 23.09389 | 5.109646 | <LOD | 1.962876 | <LOD | 1.937036 | 6.821399 | 0.95853 | <LOD | 418.4872 |
| 28.40967 | 5.17299 | <LOD | 2.058539 | <LOD | 2.02234 | 3.421628 | 0.916054 | <LOD | 394.0372 |
| 65.24189 | 6.555874 | 18.72511 | 1.174947 | <LOD | 2.702845 | 153.5218 | 2.780322 | 6675.296 | 347.8203 |
| 34.5799 | 6.571507 | 27.11437 | 1.465288 | 516.2227 | 8.107536 | 246.2501 | 3.945401 | 10496.98 | 507.909 |
| 29.16848 | 6.210911 | 58.82584 | 1.79066 | <LOD | 2.412786 | 74.70417 | 2.042886 | 6132.88 | 391.5449 |
| 33.8732 | 8.308222 | 63.75331 | 2.44694 | <LOD | 2.689744 | 82.81109 | 2.814568 | 7413.952 | 556.12 |
| <LOD | 19.23346 | 60.14852 | 1.868199 | <LOD | 2.970635 | 78.47167 | 2.147674 | 7511.742 | 442.4964 |
| 30.03649 | 6.604486 | 63.98622 | 1.952333 | <LOD | 2.81183 | 87.62147 | 2.289685 | 8137.081 | 458.8065 |
| 23.16109 | 6.531922 | 65.12296 | 1.955179 | <LOD | 2.987696 | 83.41254 | 2.228264 | 7356.632 | 456.6565 |
| 40.84264 | 6.748835 | 74.4921 | 2.121329 | <LOD | 2.924617 | 60.41857 | 2.00119 | 6996.885 | 451.1938 |
| 29.19888 | 6.878743 | 68.14342 | 2.086771 | <LOD | 2.930552 | 58.78027 | 2.030201 | 8300.581 | 487.924 |
| 38.38582 | 6.823829 | 75.98314 | 2.184583 | <LOD | 2.674248 | 55.85903 | 1.983411 | 6375.872 | 455.3552 |
| 35.10888 | 6.550436 | 70.30272 | 2.00871 | <LOD | 2.773468 | 71.73421 | 2.082771 | 7796.704 | 449.4666 |
| <LOD | 56.38121 | 73.37975 | 5.947745 | <LOD | 7.938839 | 69.17347 | 5.95269 | 4474.691 | 1158.991 |
| 23.89131 | 6.563865 | 77.23991 | 2.133383 | <LOD | 2.70615 | 57.07652 | 1.936015 | 5905.025 | 432.3494 |
| <LOD | 19.38337 | 53.8641 | 1.804774 | <LOD | 2.747189 | 68.94704 | 2.063347 | 6166.354 | 428.6924 |
| 34.39581 | 6.400743 | 78.40078 | 2.060844 | <LOD | 2.555113 | 60.43061 | 1.898059 | 7509.712 | 431.7058 |
| 22.94668 | 6.126999 | 74.89065 | 1.966439 | <LOD | 2.397784 | 64.0456 | 1.891313 | 7527.175 | 421.0403 |
| 24.54924 | 6.236785 | 72.96705 | 1.942893 | <LOD | 2.447452 | 67.11169 | 1.926345 | 6908.572 | 410.6611 |
| | | | | | | | | | |
| 25.92829 | 5.229374 | <LOD | 2.037435 | <LOD | 2.014237 | 5.811522 | 0.961853 | <LOD | 402.3779 |
| 46.451 | 6.089764 | 15.32837 | 1.064075 | <LOD | 2.718376 | 131.8503 | 2.466989 | 5416.382 | 313.3685 |
| 31.90981 | 6.471767 | 66.09287 | 1.885512 | <LOD | 2.592706 | 79.76576 | 2.102099 | 7403.356 | 407.4727 |
| 21.5454 | 6.496181 | 63.06573 | 1.924512 | <LOD | 2.454692 | 69.4277 | 2.067133 | 6245.87 | 441.3245 |
| 27.56686 | 6.103761 | 73.14094 | 1.955209 | <LOD | 2.313686 | 56.38484 | 1.80938 | 6430.015 | 408.15 |
| 30.53211 | 6.245793 | 75.15355 | 2.019875 | <LOD | 2.955723 | 59.71308 | 1.88048 | 7300.404 | 434.5577 |
| | | | | | | | | | |
| 35.1193 | 5.313235 | <LOD | 2.105659 | <LOD | 2.047151 | 7.912892 | 1.003229 | <LOD | 401.0461 |
| 27.06555 | 6.559549 | 75.8107 | 2.123646 | <LOD | 2.772644 | 56.01475 | 1.927658 | 6993.347 | 455.0809 |
| <LOD | 18.48777 | 70.54783 | 2.05461 | <LOD | 4.595274 | 52.14893 | 1.853179 | 5940.232 | 424.3702 |
| <LOD | 18.53328 | 76.46888 | 2.036954 | <LOD | 3.304398 | 56.86974 | 1.846477 | 7004.491 | 427.716 |
| 28.0106 | 6.165313 | 56.44776 | 1.746418 | <LOD | 2.636166 | 62.13911 | 1.882079 | 6870.151 | 412.0662 |
| 24.56144 | 6.196697 | 74.79881 | 2.012267 | <LOD | 2.604994 | 48.77744 | 1.747854 | 5390.918 | 436.1806 |
| 27.66995 | 6.481336 | 77.45657 | 2.111041 | <LOD | 2.873646 | 58.31451 | 1.928837 | 7021.122 | 443.5534 |
| 41.66456 | 6.206429 | 64.83361 | 1.866663 | <LOD | 2.598971 | 59.21281 | 1.857377 | 6533.997 | 420.5563 |
| 25.97423 | 6.222047 | 76.00082 | 2.014715 | <LOD | 2.703938 | 62.44129 | 1.904434 | 6936.093 | 440.6626 |
| 26.28061 | 6.410424 | 73.95722 | 2.051587 | <LOD | 2.760886 | 56.25847 | 1.885069 | 6591.117 | 426.4125 |
| 36.54986 | 6.534783 | 75.91115 | 2.078596 | <LOD | 2.60335 | 63.36932 | 1.97958 | 6515.625 | 439.2129 |
| 34.74597 | 6.509901 | 60.96847 | 1.850456 | <LOD | 2.512368 | 78.45013 | 2.120446 | 6498.638 | 426.5895 |
| 23.65524 | 6.220644 | 55.74249 | 1.751495 | <LOD | 2.536885 | 73.36914 | 2.027738 | 8877.063 | 460.4734 |
| 25.34633 | 6.314432 | 54.61721 | 1.765414 | <LOD | 2.317485 | 63.89984 | 1.950188 | 8749.34 | 461.5404 |
| 22.21141 | 6.486768 | 63.68718 | 1.925816 | <LOD | 3.075449 | 56.28108 | 1.887409 | 5745.171 | 439.7046 |
| 25.72945 | 6.195698 | 73.24078 | 1.941398 | <LOD | 2.548973 | 69.86757 | 1.950843 | 6696.218 | 392.5117 |
| 23.9064 | 6.295507 | 54.81823 | 1.743382 | <LOD | 2.684929 | 77.25092 | 2.076224 | 8423.366 | 438.1282 |
| 37.2136 | 6.665941 | 70.35317 | 2.046877 | <LOD | 2.663107 | 68.9866 | 2.088765 | 7468.755 | 468.1374 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.99935 | 6.581124 | 69.96097 | 2.037339 | <LOD | 2.516294 | 56.53214 | 1.928214 | 6572.963 | 451.8229 |
| 36.48995 | 6.373399 | 82.40548 | 2.135369 | <LOD | 2.62318 | 59.47004 | 1.908689 | 6936.271 | 444.7928 |
| 31.01093 | 6.39607 | 59.06079 | 1.837486 | <LOD | 2.793047 | 54.92337 | 1.848194 | 5034.279 | 402.316 |
| <LOD | 19.82375 | 65.24484 | 1.994947 | <LOD | 2.953953 | 61.757 | 2.014887 | 6478.849 | 460.5467 |
| <LOD | 18.587 | 61.61887 | 1.802704 | <LOD | 2.457872 | 68.09927 | 1.939029 | 5402.385 | 384.3021 |
| 26.25908 | 6.1077 | 54.74345 | 1.695131 | <LOD | 2.570622 | 66.38516 | 1.899523 | 6776.323 | 397.7145 |
| 23.75222 | 6.393514 | 60.32798 | 1.837693 | <LOD | 2.60591 | 76.69683 | 2.095061 | 7786.885 | 458.5888 |
| 32.71831 | 6.068998 | 79.88033 | 1.998663 | <LOD | 2.5751 | 54.54769 | 1.752383 | 6422.922 | 408.7685 |
| <LOD | 18.64627 | 73.44809 | 1.988509 | <LOD | 2.489265 | 64.16769 | 1.931293 | 6197.58 | 425.703 |
| 22.25169 | 6.393596 | 67.62241 | 1.958646 | <LOD | 2.555281 | 54.94038 | 1.860965 | 7406.225 | 434.764 |
| 30.685 | 6.585763 | 60.73451 | 1.883864 | <LOD | 2.571055 | 60.64803 | 1.949873 | 5976.074 | 400.4297 |
| 20.92201 | 6.507377 | 64.45217 | 1.940674 | <LOD | 2.382138 | 63.69404 | 1.995091 | 6936.83 | 419.21 |
| 29.83222 | 6.496459 | 66.73974 | 1.940701 | <LOD | 2.625335 | 77.38041 | 2.125808 | 7336.241 | 439.7564 |
| 22.09802 | 6.445578 | 67.33883 | 1.92857 | <LOD | 2.486446 | 76.76891 | 2.096948 | 7088.616 | 406.4186 |
| 26.35197 | 6.186178 | 73.39427 | 1.923293 | <LOD | 2.553395 | 79.27226 | 2.037406 | 6758.101 | 387.2667 |
| | | | | | | | | | |
| 22.00753 | 6.235892 | 75.46725 | 1.957812 | <LOD | 2.556921 | 79.45083 | 2.05136 | 7653.26 | 410.8719 |
| 31.08456 | 6.264984 | 60.2611 | 1.781424 | <LOD | 2.461909 | 70.44952 | 1.961979 | 6654.139 | 394.4268 |
| 27.11509 | 6.401095 | 75.30595 | 2.063642 | <LOD | 2.703051 | 55.49672 | 1.874744 | 7078.628 | 431.3187 |
| <LOD | 19.05679 | 68.67911 | 1.972177 | <LOD | 2.815032 | 51.22926 | 1.811704 | 6008.835 | 433.1654 |
| <LOD | 20.54778 | 72.35473 | 2.163185 | <LOD | 2.810957 | 59.65919 | 2.059186 | 7107.965 | 460.1211 |
| <LOD | 18.63861 | 58.50132 | 1.819027 | <LOD | 2.516433 | 64.20248 | 1.955891 | 5670.755 | 410.5327 |
| 23.58241 | 6.404048 | 63.84379 | 1.897137 | <LOD | 2.372799 | 70.86639 | 2.042532 | 8349.915 | 452.6684 |
| 25.96637 | 6.146335 | 56.75178 | 1.740483 | <LOD | 2.360741 | 73.91647 | 2.004981 | 7784.479 | 436.4365 |
| 31.0408 | 6.445816 | 55.30587 | 1.789301 | <LOD | 2.505784 | 68.39201 | 2.020325 | 7867.747 | 455.5129 |
| | | | | | | | | | |
| 26.98621 | 5.161476 | <LOD | 2.054474 | <LOD | 1.882797 | 4.588509 | 0.928 | <LOD | 394.5737 |
| 38.82144 | 6.026142 | 14.01672 | 1.034258 | <LOD | 2.773595 | 133.4981 | 2.4633 | 4953.808 | 306.2845 |

| Zr | Zr +/- |
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| 15.20303 | 1.438236 |
| 8.605663 | 1.400737 |
| 497.1413 | 5.379519 |
| 282.0105 | 4.089399 |
| 228.1972 | 3.420122 |
| 278.4997 | 5.031516 |
| 292.2942 | 4.033794 |
| 298.3733 | 4.155371 |
| 298.7261 | 4.132265 |
| 261.3574 | 3.918579 |
| 276.4867 | 4.145175 |
| 225.1021 | 3.686861 |
| 281.8074 | 3.978221 |
| 261.3383 | 11.04974 |
| 252.106 | 3.793788 |
| 257.9755 | 3.80874 |
| 292.4554 | 3.960838 |
| 253.8506 | 3.563604 |
| 329.1669 | 4.145945 |
| | |
| 14.56159 | 1.462466 |
| 412.0856 | 4.537739 |
| 396.6231 | 4.747488 |
| 263.5963 | 3.85335 |
| 202.24 | 3.1736 |
| 230.2621 | 3.442251 |
| | |
| 16.11966 | 1.487079 |
| 235.8077 | 3.660899 |
| 208.0975 | 3.341628 |
| 231.4945 | 3.446329 |
| 233.9998 | 3.432003 |
| 209.1931 | 3.275607 |
| 240.0299 | 3.648144 |
| 191.1537 | 3.111875 |
| 239.8341 | 3.510556 |
| 249.9335 | 3.684931 |
| 269.1949 | 3.868601 |
| 344.9425 | 4.407473 |
| 255.1949 | 3.630729 |
| 238.6541 | 3.556383 |
| 318.4873 | 4.235803 |
| 319.2256 | 4.049446 |
| 300.1274 | 3.99055 |
| 266.8481 | 3.928013 |

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| 259.4813 | 3.852451 |
| 216.1246 | 3.391194 |
| 262.5245 | 3.752628 |
| 263.9935 | 3.933888 |
| 338.2515 | 4.219491 |
| 270.9431 | 3.662495 |
| 310.3941 | 4.123635 |
| 248.9379 | 3.465668 |
| 254.062 | 3.634448 |
| 254.1347 | 3.716312 |
| 311.0626 | 4.220935 |
| 274.8391 | 3.942524 |
| 311.4507 | 4.177843 |
| 348.7144 | 4.432236 |
| 345.7478 | 4.223393 |
| | |
| 372.9657 | 4.454133 |
| 331.8166 | 4.163198 |
| 227.4526 | 3.512232 |
| 258.5088 | 3.736465 |
| 257.1862 | 4.016226 |
| 245.52 | 3.614422 |
| 286.0467 | 3.955502 |
| 258.6819 | 3.605913 |
| 270.1871 | 3.842766 |
| | |
| 18.47931 | 1.468493 |
| 427.5375 | 4.613863 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 29.68 | 21-Apr-09 | 8:35:58 | 1 | -0.0298 | | | | |
| 65.15 | 21-Apr-09 | 8:38:23 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 65.19 | 21-Apr-09 | 8:41:17 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 68.77 | 21-Apr-09 | 8:43:51 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 64.41 | 21-Apr-09 | 8:48:15 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 65.63 | 21-Apr-09 | 8:53:44 | 6 | | Ex-situ | | NSP-FL-2F | 0-1 ft |
| 40.05 | 21-Apr-09 | 8:58:23 | 7 | | Ex-situ | | NSP-FL-2E | 0-1 ft |
| 67.08 | 21-Apr-09 | 9:01:33 | 8 | | Ex-situ | | NSP-FL-2D | 0-1 ft |
| 66.63 | 21-Apr-09 | 9:04:16 | 9 | | Ex-situ | | NSP-FL-2D | 0-1 ft |
| 66.81 | 21-Apr-09 | 9:06:57 | 10 | | Ex-situ | | NSP-FL-2D | 0-1 ft |
| 68.39 | 21-Apr-09 | 9:11:16 | 11 | | Ex-situ | | SSP-FL-2L | 0-1 ft |
| 69.26 | 21-Apr-09 | 9:14:29 | 12 | | Ex-situ | | SSP-FL-1L | 0-1 ft |
| 69.72 | 21-Apr-09 | 9:19:35 | 13 | | Ex-situ | | SSP-FL-2K | 0-1 ft |
| 66.21 | 21-Apr-09 | 9:23:25 | 14 | | Ex-situ | | SSP-FL-1K | 0-1 ft |
| 7.96 | 21-Apr-09 | 9:30:30 | 15 | | Ex-situ | | SSP-FL-2J | 0-1 ft |
| 68.12 | 21-Apr-09 | 9:33:11 | 16 | | Ex-situ | | SSP-FL-2J (I | 0-1 ft |
| 67.67 | 21-Apr-09 | 9:36:43 | 17 | | Ex-situ | | NSP-FL-4E | 0-1 ft |
| 65.76 | 21-Apr-09 | 9:41:25 | 18 | | Ex-situ | | SSP-SW-16 | 0-1 ft |
| 65.91 | 21-Apr-09 | 9:44:21 | 19 | | Ex-situ | | SSP-SW-15 | 0-1 ft |
| 63.52 | 21-Apr-09 | 9:48:23 | 20 | | Ex-situ | | SSP-SW-17 | 0-1 ft |
| 33.32 | 21-Apr-09 | 10:20:04 | 21 | -0.0277 | | | | |
| 66.5 | 21-Apr-09 | 10:23:02 | 22 | | Ex-situ | Si Blank | | 0-1 ft |
| 66.39 | 21-Apr-09 | 10:26:13 | 23 | | Ex-situ | XRF 250 | | 0-1 ft |
| 67.38 | 21-Apr-09 | 10:29:56 | 24 | | Ex-situ | | SSP-FL-1C | 0-1 ft |
| 67.5 | 21-Apr-09 | 10:34:10 | 25 | | Ex-situ | | SSP-FL-1D | 0-1 ft |
| 65 | 21-Apr-09 | 10:38:40 | 26 | | Ex-situ | | SSP-FL-2B | 0-1 ft |
| 64.15 | 21-Apr-09 | 10:44:20 | 27 | | Ex-situ | | SSP-FL-2C | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.042456 | <LOD | 3.441524 | <LOD | 12.92514 | <LOD | 28.61377 | <LOD | 5.461757 |
| 98.1746 | 3.733781 | <LOD | 8.161436 | <LOD | 12.94277 | <LOD | 27.70145 | <LOD | 5.794088 |
| 295.2176 | 6.856087 | <LOD | 14.66746 | <LOD | 16.73599 | <LOD | 34.37875 | 20.76231 | 3.114588 |
| 485.65 | 10.86355 | 444.3321 | 10.32132 | <LOD | 18.48969 | <LOD | 48.10514 | 22.72635 | 4.155075 |
| 8.463195 | 2.437968 | <LOD | 5.184686 | <LOD | 16.94304 | <LOD | 44.83264 | 43.37194 | 3.919803 |
| 24.10548 | 3.765083 | <LOD | 8.045491 | <LOD | 23.73767 | <LOD | 59.0601 | 45.17986 | 5.267021 |
| 230.2577 | 6.490514 | <LOD | 13.95062 | 72.53037 | 7.706849 | <LOD | 46.29498 | 64.57214 | 4.677178 |
| 239.7495 | 6.725929 | <LOD | 14.29152 | 98.24636 | 8.293514 | <LOD | 45.54538 | 64.5256 | 4.783776 |
| 222.8976 | 6.462706 | <LOD | 14.1425 | 71.08814 | 7.745874 | <LOD | 45.81475 | 67.76977 | 4.801863 |
| 15.83115 | 2.886148 | <LOD | 6.384377 | <LOD | 18.2786 | <LOD | 48.55597 | 77.6511 | 5.060184 |
| 19.30335 | 3.058004 | <LOD | 6.503815 | <LOD | 19.08018 | <LOD | 48.97668 | 57.66331 | 4.700952 |
| 12.56142 | 2.832197 | <LOD | 6.090671 | <LOD | 19.66058 | <LOD | 48.08307 | 78.36493 | 5.198141 |
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| <LOD | 25.12194 | <LOD | 18.77195 | <LOD | 53.47738 | <LOD | 136.0852 | 79.40752 | 14.43623 |
| 52.27182 | 3.703739 | <LOD | 8.530314 | 30.69984 | 7.043494 | <LOD | 46.88516 | 83.86091 | 5.189345 |
| 159.2377 | 5.549668 | <LOD | 12.29222 | 124.0951 | 8.748596 | <LOD | 45.46178 | 60.245 | 4.698312 |
| 22.16987 | 2.877733 | <LOD | 6.415336 | <LOD | 17.96732 | <LOD | 44.48655 | 70.755 | 4.654426 |
| 19.89862 | 2.716121 | <LOD | 5.977682 | <LOD | 16.63008 | <LOD | 41.56058 | 67.58019 | 4.438315 |
| 22.52524 | 2.800201 | <LOD | 6.082883 | <LOD | 17.39442 | <LOD | 45.42001 | 65.93028 | 4.419791 |
| | | | | | | | | | |
| <LOD | 5.110476 | <LOD | 3.276122 | <LOD | 12.87001 | <LOD | 26.10649 | <LOD | 5.924737 |
| 251.8248 | 6.07966 | <LOD | 13.16219 | <LOD | 15.08463 | <LOD | 32.66861 | 10.65155 | 2.657876 |
| 35.95833 | 3.125423 | <LOD | 6.694821 | <LOD | 16.84442 | <LOD | 40.23169 | 66.68597 | 4.463327 |
| 14.45047 | 2.752548 | <LOD | 6.081957 | <LOD | 17.70733 | <LOD | 48.10577 | 56.56073 | 4.444482 |
| 16.4213 | 2.651122 | <LOD | 5.929784 | <LOD | 17.57097 | <LOD | 44.32002 | 83.12272 | 4.829903 |
| 320.1815 | 7.482142 | <LOD | 15.63038 | <LOD | 18.34642 | <LOD | 46.88426 | 70.11807 | 4.628344 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.836312 | <LOD | 74.81517 | 253.1842 | 15.3531 | <LOD | 52.41594 | <LOD | 37.61518 |
| <LOD | 6.108292 | <LOD | 75.41467 | <LOD | 25.12807 | <LOD | 60.97398 | 102.4151 | 13.01359 |
| <LOD | 8.002195 | <LOD | 70.67856 | 6635.368 | 86.12801 | <LOD | 83.11275 | <LOD | 38.60784 |
| 504.856 | 12.68914 | 87.0235 | 28.2994 | 35175.33 | 335.4795 | 647.861 | 55.08288 | 438.2388 | 16.22104 |
| <LOD | 7.323282 | <LOD | 86.31462 | 33004.7 | 305.7539 | <LOD | 107.1064 | <LOD | 43.12731 |
| <LOD | 10.35964 | <LOD | 112.591 | 36368.38 | 437.6014 | <LOD | 145.0919 | <LOD | 56.73888 |
| <LOD | 8.478079 | <LOD | 85.18865 | 37665.26 | 351.8891 | <LOD | 113.3773 | <LOD | 43.37456 |
| <LOD | 7.829164 | <LOD | 88.40358 | 38781.41 | 367.0144 | <LOD | 119.3539 | <LOD | 44.72407 |
| <LOD | 8.037056 | <LOD | 87.1247 | 38567.49 | 363.145 | <LOD | 125.5991 | <LOD | 44.03466 |
| <LOD | 7.426247 | <LOD | 88.51376 | 41692.38 | 400.1513 | <LOD | 119.1218 | <LOD | 45.56876 |
| <LOD | 8.58486 | <LOD | 91.52107 | 42954.48 | 421.2397 | <LOD | 126.8395 | <LOD | 46.87959 |
| <LOD | 8.117791 | <LOD | 90.25865 | 41917.17 | 410.8858 | <LOD | 126.8057 | <LOD | 46.13822 |
| <LOD | 8.40302 | <LOD | 87.4584 | 42545 | 395.2762 | <LOD | 121.4706 | <LOD | 44.47057 |
| <LOD | 24.97815 | <LOD | 263.0638 | 34674.91 | 957.1111 | <LOD | 347.4549 | <LOD | 131.8008 |
| <LOD | 7.47004 | <LOD | 89.42181 | 38539.44 | 368.9307 | <LOD | 120.7758 | <LOD | 45.16046 |
| <LOD | 7.839741 | <LOD | 88.36498 | 35432.91 | 339.0345 | <LOD | 116.7616 | <LOD | 44.55729 |
| <LOD | 7.734329 | <LOD | 85.49578 | 38394.29 | 352.1502 | <LOD | 111.8943 | <LOD | 43.44678 |
| <LOD | 6.999448 | <LOD | 81.791 | 34077.5 | 309.5894 | <LOD | 105.6979 | <LOD | 41.5631 |
| <LOD | 6.91123 | <LOD | 83.41844 | 35391.76 | 319.2336 | <LOD | 109.5594 | <LOD | 42.50483 |
| | | | | | | | | | |
| <LOD | 5.411747 | <LOD | 75.30377 | 360.6636 | 17.75802 | <LOD | 46.58946 | <LOD | 38.4294 |
| <LOD | 7.286244 | <LOD | 73.05744 | 5510.371 | 73.28595 | <LOD | 75.07474 | <LOD | 38.61018 |
| <LOD | 7.288183 | <LOD | 82.56233 | 22540.38 | 221.5687 | <LOD | 99.27379 | <LOD | 42.04666 |
| <LOD | 7.616368 | <LOD | 87.424 | 40581.33 | 381.7385 | <LOD | 121.0068 | <LOD | 44.49965 |
| <LOD | 7.431554 | <LOD | 83.49623 | 39670.11 | 355.3679 | <LOD | 109.1463 | <LOD | 42.30849 |
| <LOD | 7.143685 | <LOD | 84.64844 | 44681.31 | 399.681 | <LOD | 119.7492 | <LOD | 42.91373 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 70.91364 | <LOD | 52.48216 | <LOD | 69.14537 | <LOD | 2.045227 | <LOD | 30.10797 |
| <LOD | 71.25515 | <LOD | 53.97589 | <LOD | 67.92015 | <LOD | 1.616221 | <LOD | 29.31816 |
| <LOD | 68.9876 | <LOD | 56.21092 | <LOD | 127.3687 | <LOD | 7.111475 | <LOD | 44.96664 |
| <LOD | 82.06844 | 434.3436 | 22.62497 | <LOD | 202.1973 | 29.63437 | 5.822425 | <LOD | 88.32382 |
| <LOD | 81.05901 | <LOD | 59.87682 | <LOD | 157.3898 | <LOD | 16.09038 | 430.6176 | 33.00151 |
| <LOD | 107.2751 | <LOD | 78.53713 | <LOD | 221.2725 | <LOD | 22.27413 | 486.4067 | 45.61042 |
| <LOD | 80.56786 | <LOD | 60.86649 | <LOD | 178.2731 | 22.37949 | 5.88941 | 272.0864 | 32.08654 |
| <LOD | 83.46224 | <LOD | 62.40604 | <LOD | 182.3406 | 31.41868 | 6.11843 | 257.2018 | 32.65927 |
| <LOD | 82.51581 | <LOD | 61.8626 | <LOD | 188.6028 | 27.90428 | 6.048997 | 299.5556 | 33.43628 |
| <LOD | 84.63046 | <LOD | 63.50967 | <LOD | 183.3573 | 29.54934 | 6.451341 | 386.5116 | 36.1425 |
| <LOD | 86.96178 | <LOD | 65.25118 | <LOD | 194.682 | 26.99115 | 6.683896 | 778.1607 | 43.90974 |
| <LOD | 85.62814 | <LOD | 64.75655 | <LOD | 189.3576 | 31.23068 | 6.609674 | 172.3488 | 33.0809 |
| <LOD | 83.6135 | <LOD | 61.92192 | <LOD | 179.3176 | 42.85826 | 6.40276 | 438.3976 | 36.27903 |
| <LOD | 249.9863 | <LOD | 179.7625 | <LOD | 504.6329 | <LOD | 51.0874 | 335.0842 | 96.17386 |
| <LOD | 84.78598 | <LOD | 62.81398 | <LOD | 181.7095 | 22.21456 | 6.107638 | 459.8047 | 36.53231 |
| <LOD | 84.11911 | <LOD | 62.32533 | <LOD | 178.4088 | <LOD | 17.3423 | 384.3242 | 34.22366 |
| <LOD | 81.27316 | <LOD | 60.40138 | <LOD | 172.4883 | 24.65831 | 5.865478 | 291.5576 | 32.03901 |
| <LOD | 77.81535 | <LOD | 58.42654 | <LOD | 168.5117 | 28.51727 | 5.436262 | 676.6391 | 36.67941 |
| <LOD | 79.22095 | <LOD | 58.72405 | <LOD | 166.311 | 34.66141 | 5.560012 | 277.8337 | 30.46596 |
| | | | | | | | | | |
| <LOD | 72.06465 | <LOD | 53.19176 | <LOD | 67.70255 | <LOD | 2.122133 | <LOD | 30.18126 |
| <LOD | 70.4575 | <LOD | 54.49781 | <LOD | 118.6786 | <LOD | 6.24768 | <LOD | 41.64482 |
| <LOD | 78.33028 | <LOD | 59.27809 | <LOD | 158.8994 | 17.02087 | 4.489672 | 873.7693 | 38.24398 |
| <LOD | 83.54645 | <LOD | 62.13497 | <LOD | 186.0641 | <LOD | 18.46458 | 294.7851 | 33.71253 |
| <LOD | 79.32698 | <LOD | 59.17909 | <LOD | 167.1291 | 26.04478 | 5.851957 | 186.7617 | 29.79761 |
| <LOD | 80.31156 | <LOD | 59.63964 | <LOD | 176.8807 | 35.97106 | 6.315256 | 148.4908 | 30.76965 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 23.09389 | 5.109646 | <LOD | 1.962876 | <LOD | 1.937036 | 6.821399 | 0.95853 | <LOD | 418.4872 |
| 28.40967 | 5.17299 | <LOD | 2.058539 | <LOD | 2.02234 | 3.421628 | 0.916054 | <LOD | 394.0372 |
| 65.24189 | 6.555874 | 18.72511 | 1.174947 | <LOD | 2.702845 | 153.5218 | 2.780322 | 6675.296 | 347.8203 |
| 34.5799 | 6.571507 | 27.11437 | 1.465288 | 516.2227 | 8.107536 | 246.2501 | 3.945401 | 10496.98 | 507.909 |
| 29.16848 | 6.210911 | 58.82584 | 1.79066 | <LOD | 2.412786 | 74.70417 | 2.042886 | 6132.88 | 391.5449 |
| 33.8732 | 8.308222 | 63.75331 | 2.44694 | <LOD | 2.689744 | 82.81109 | 2.814568 | 7413.952 | 556.12 |
| <LOD | 19.23346 | 60.14852 | 1.868199 | <LOD | 2.970635 | 78.47167 | 2.147674 | 7511.742 | 442.4964 |
| 30.03649 | 6.604486 | 63.98622 | 1.952333 | <LOD | 2.81183 | 87.62147 | 2.289685 | 8137.081 | 458.8065 |
| 23.16109 | 6.531922 | 65.12296 | 1.955179 | <LOD | 2.987696 | 83.41254 | 2.228264 | 7356.632 | 456.6565 |
| 40.84264 | 6.748835 | 74.4921 | 2.121329 | <LOD | 2.924617 | 60.41857 | 2.00119 | 6996.885 | 451.1938 |
| 29.19888 | 6.878743 | 68.14342 | 2.086771 | <LOD | 2.930552 | 58.78027 | 2.030201 | 8300.581 | 487.924 |
| 38.38582 | 6.823829 | 75.98314 | 2.184583 | <LOD | 2.674248 | 55.85903 | 1.983411 | 6375.872 | 455.3552 |
| 35.10888 | 6.550436 | 70.30272 | 2.00871 | <LOD | 2.773468 | 71.73421 | 2.082771 | 7796.704 | 449.4666 |
| <LOD | 56.38121 | 73.37975 | 5.947745 | <LOD | 7.938839 | 69.17347 | 5.95269 | 4474.691 | 1158.991 |
| 23.89131 | 6.563865 | 77.23991 | 2.133383 | <LOD | 2.70615 | 57.07652 | 1.936015 | 5905.025 | 432.3494 |
| <LOD | 19.38337 | 53.8641 | 1.804774 | <LOD | 2.747189 | 68.94704 | 2.063347 | 6166.354 | 428.6924 |
| 34.39581 | 6.400743 | 78.40078 | 2.060844 | <LOD | 2.555113 | 60.43061 | 1.898059 | 7509.712 | 431.7058 |
| 22.94668 | 6.126999 | 74.89065 | 1.966439 | <LOD | 2.397784 | 64.0456 | 1.891313 | 7527.175 | 421.0403 |
| 24.54924 | 6.236785 | 72.96705 | 1.942893 | <LOD | 2.447452 | 67.11169 | 1.926345 | 6908.572 | 410.6611 |
| | | | | | | | | | |
| 25.92829 | 5.229374 | <LOD | 2.037435 | <LOD | 2.014237 | 5.811522 | 0.961853 | <LOD | 402.3779 |
| 46.451 | 6.089764 | 15.32837 | 1.064075 | <LOD | 2.718376 | 131.8503 | 2.466989 | 5416.382 | 313.3685 |
| 31.90981 | 6.471767 | 66.09287 | 1.885512 | <LOD | 2.592706 | 79.76576 | 2.102099 | 7403.356 | 407.4727 |
| 21.5454 | 6.496181 | 63.06573 | 1.924512 | <LOD | 2.454692 | 69.4277 | 2.067133 | 6245.87 | 441.3245 |
| 27.56686 | 6.103761 | 73.14094 | 1.955209 | <LOD | 2.313686 | 56.38484 | 1.80938 | 6430.015 | 408.15 |
| 30.53211 | 6.245793 | 75.15355 | 2.019875 | <LOD | 2.955723 | 59.71308 | 1.88048 | 7300.404 | 434.5577 |

| Zr | Zr +/- |
|---|---|
| 15.20303 | 1.438236 |
| 8.605663 | 1.400737 |
| 497.1413 | 5.379519 |
| 282.0105 | 4.089399 |
| 228.1972 | 3.420122 |
| 278.4997 | 5.031516 |
| 292.2942 | 4.033794 |
| 298.3733 | 4.155371 |
| 298.7261 | 4.132265 |
| 261.3574 | 3.918579 |
| 276.4867 | 4.145175 |
| 225.1021 | 3.686861 |
| 281.8074 | 3.978221 |
| 261.3383 | 11.04974 |
| 252.106 | 3.793788 |
| 257.9755 | 3.80874 |
| 292.4554 | 3.960838 |
| 253.8506 | 3.563604 |
| 329.1669 | 4.145945 |
| | |
| 14.56159 | 1.462466 |
| 412.0856 | 4.537739 |
| 396.6231 | 4.747488 |
| 263.5963 | 3.85335 |
| 202.24 | 3.1736 |
| 230.2621 | 3.442251 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 31.9 | 22-Apr-09 | 8:09:07 | 1 | -0.0289 | | | | |
| 64.71 | 22-Apr-09 | 8:13:45 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 64.67 | 22-Apr-09 | 8:16:57 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 65.63 | 22-Apr-09 | 8:19:34 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 63.78 | 22-Apr-09 | 8:22:47 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 68.3 | 22-Apr-09 | 8:27:17 | 6 | | Ex-situ | | SSP-SW-24 | 0-1 ft |
| 64.11 | 22-Apr-09 | 8:31:24 | 7 | | Ex-situ | | SSP-SW-25 | 0-1 ft |
| 65.45 | 22-Apr-09 | 8:34:14 | 8 | | Ex-situ | | SSP-SW-26 | 0-1 ft |
| 65.88 | 22-Apr-09 | 8:37:08 | 9 | | Ex-situ | | SSP-SW-27 | 0-1 ft |
| 63.52 | 22-Apr-09 | 8:57:32 | 10 | | Ex-situ | | SSP-SW-28 | 0-1 ft |
| 155.67 | 22-Apr-09 | 9:00:09 | 11 | | Ex-situ | | SSP-SW-29 | 0-1 ft |
| 63.29 | 22-Apr-09 | 9:05:17 | 12 | | Ex-situ | | SSP-SW-30 | 0-1 ft |
| 62.56 | 22-Apr-09 | 9:08:49 | 13 | | Ex-situ | | SSP-SW-31 | 0-1 ft |
| 64.89 | 22-Apr-09 | 9:11:48 | 14 | | Ex-situ | | SSP-SW-32 | 0-1 ft |
| 63.9 | 22-Apr-09 | 9:14:27 | 15 | | Ex-situ | | SSP-SW-33 | 0-1 ft |
| 61.9 | 22-Apr-09 | 9:17:03 | 16 | | Ex-situ | | SSP-SW-34 | 0-1 ft |
| 32.33 | 22-Apr-09 | 14:29:56 | 17 | -0.0284 | | | | |
| 65.6 | 22-Apr-09 | 14:31:47 | 18 | | Ex-situ | Si Blank | | 0-1 ft |
| 63.8 | 22-Apr-09 | 14:35:21 | 19 | | Ex-situ | XRF 250 | | 0-1 ft |
| 65.08 | 22-Apr-09 | 14:41:55 | 20 | | Ex-situ | | BANK4 | 0-1 ft |
| 65.39 | 22-Apr-09 | 14:45:26 | 21 | | Ex-situ | | BANK5 | 0-1 ft |
| 63.78 | 22-Apr-09 | 14:48:01 | 22 | | Ex-situ | | Bank6 | 0-1 ft |
| 66.82 | 22-Apr-09 | 14:53:41 | 23 | | Ex-situ | | SSP-FL-1F | 0-1 ft |
| 66.36 | 22-Apr-09 | 14:57:15 | 24 | | Ex-situ | | SSP-FL-1H | 0-1 ft |
| 66.1 | 22-Apr-09 | 15:00:21 | 25 | | Ex-situ | | SSP-FL-1G | 0-1 ft |
| 63.24 | 22-Apr-09 | 15:03:46 | 26 | | Ex-situ | | SSP-SW-35 | 0-1 ft |
| 66.19 | 22-Apr-09 | 15:06:22 | 27 | | Ex-situ | | SSP-SW-36 | 0-1 ft |
| 67.48 | 22-Apr-09 | 15:09:48 | 28 | | Ex-situ | | SSP-SW-37 | 0-1 ft |
| 66.81 | 22-Apr-09 | 15:12:30 | 29 | | Ex-situ | | SSP-SW-37 | 0-1 ft |
| 69.19 | 22-Apr-09 | 15:15:02 | 30 | | Ex-situ | | SSP-SW-39 | 0-1 ft |
| 66.86 | 22-Apr-09 | 15:17:29 | 31 | | Ex-situ | | SSP-SW-40 | 0-1 ft |
| 62.84 | 22-Apr-09 | 15:20:22 | 32 | | Ex-situ | | SSP-SW-41 | 0-1 ft |
| 5.5 | 22-Apr-09 | 15:23:56 | 33 | | Ex-situ | | SSP-SW-36 | 1-2 ft |
| 66.6 | 22-Apr-09 | 15:26:39 | 34 | | Ex-situ | | SSP-SW-36 | 1-2 ft |
| 64.83 | 22-Apr-09 | 15:30:06 | 35 | | Ex-situ | | SSP-SW-37 | 1-2 ft |
| 33.46 | 22-Apr-09 | 15:33:14 | 36 | -0.0281 | | | | |
| 65.88 | 22-Apr-09 | 15:36:07 | 37 | | Ex-situ | Si Blank | | 0-1 ft |
| 66.23 | 22-Apr-09 | 15:39:22 | 38 | | Ex-situ | XRF 250 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 4.937061 | <LOD | 3.327176 | <LOD | 12.98038 | <LOD | 27.53765 | <LOD | 5.750453 |
| 95.98488 | 3.665096 | <LOD | 7.992795 | <LOD | 12.55537 | <LOD | 26.4851 | <LOD | 5.308054 |
| 254.3426 | 6.215669 | <LOD | 13.29856 | <LOD | 15.34065 | <LOD | 33.89229 | 11.61878 | 2.749005 |
| 475.2503 | 10.66307 | 416.1474 | 10.00378 | <LOD | 18.84294 | <LOD | 48.46825 | 13.70824 | 3.886701 |
| 41.06178 | 3.480376 | <LOD | 7.63233 | <LOD | 18.86601 | <LOD | 46.6437 | 58.03522 | 4.585841 |
| 42.89431 | 3.281796 | <LOD | 7.08636 | <LOD | 17.89905 | <LOD | 44.56838 | 52.00464 | 4.130862 |
| 12.72608 | 2.594932 | <LOD | 5.689473 | <LOD | 17.63034 | <LOD | 44.85784 | 51.23996 | 4.176424 |
| 52.90915 | 3.551006 | <LOD | 8.009271 | <LOD | 18.03116 | <LOD | 43.89768 | 71.85315 | 4.67279 |
| 32.84855 | 2.853349 | <LOD | 6.510777 | <LOD | 15.98519 | <LOD | 38.11222 | 44.71645 | 3.710015 |
| 55.20819 | 2.232622 | 5.517562 | 1.691046 | <LOD | 11.14122 | <LOD | 26.62354 | 61.66071 | 2.759238 |
| 19.41772 | 2.643092 | <LOD | 5.67896 | <LOD | 17.14945 | <LOD | 41.55241 | 70.02376 | 4.398484 |
| 51.1866 | 3.271058 | <LOD | 7.043427 | <LOD | 15.93291 | <LOD | 41.66835 | 60.49011 | 4.10879 |
| 37.98605 | 3.113996 | <LOD | 6.978511 | <LOD | 17.36109 | <LOD | 41.67038 | 69.28129 | 4.469851 |
| 23.01732 | 2.705603 | <LOD | 5.886669 | <LOD | 16.26305 | <LOD | 41.54921 | 55.08202 | 4.035984 |
| 36.76176 | 2.872832 | <LOD | 6.412161 | <LOD | 15.90324 | <LOD | 36.00112 | 43.96061 | 3.618175 |
| <LOD | 4.945686 | <LOD | 3.252453 | <LOD | 13.00294 | <LOD | 26.17316 | <LOD | 5.547072 |
| 257.2405 | 6.12558 | <LOD | 12.99659 | <LOD | 14.95429 | <LOD | 34.18837 | 18.83484 | 2.911778 |
| 1054.534 | 14.93943 | <LOD | 28.10573 | 36.93229 | 6.835553 | <LOD | 42.65165 | 90.0841 | 5.127142 |
| 296.5399 | 6.95077 | <LOD | 14.52128 | <LOD | 16.98773 | <LOD | 39.30629 | 72.36658 | 4.490651 |
| 2066.429 | 24.17621 | 68.2102 | 13.52232 | 63.98375 | 7.654908 | <LOD | 46.64787 | 71.31458 | 4.897581 |
| 13.23962 | 2.775444 | <LOD | 6.366741 | <LOD | 18.90621 | <LOD | 48.19723 | 89.34834 | 5.270449 |
| 21.22802 | 2.973 | <LOD | 6.518728 | <LOD | 18.72694 | <LOD | 49.19175 | 77.77274 | 4.995352 |
| 146.7435 | 5.366377 | <LOD | 11.96317 | <LOD | 19.93265 | <LOD | 48.76837 | 95.76693 | 5.37432 |
| 30.50054 | 2.897806 | <LOD | 6.457356 | <LOD | 16.5073 | <LOD | 38.73023 | 62.14119 | 4.230865 |
| 532.4863 | 9.984839 | <LOD | 20.46859 | 25.1212 | 6.630675 | <LOD | 43.12997 | 74.17857 | 4.806087 |
| 1014.738 | 15.4991 | 92.84595 | 10.27895 | 67.81042 | 8.050124 | <LOD | 49.2349 | 89.63297 | 5.507885 |
| 10.17207 | 2.448462 | <LOD | 5.400147 | <LOD | 16.81297 | <LOD | 41.05121 | 58.29927 | 4.263974 |
| 15.15105 | 2.907132 | <LOD | 6.332629 | <LOD | 18.75591 | <LOD | 47.51845 | 74.57747 | 5.055615 |
| 15.10989 | 2.745114 | <LOD | 5.933214 | <LOD | 18.49473 | <LOD | 45.53152 | 65.09521 | 4.610569 |
| 18.026 | 2.674389 | 8.1945 | 2.090439 | <LOD | 17.32424 | <LOD | 44.69188 | 72.8582 | 4.546705 |
| 422.4833 | 30.7655 | <LOD | 65.5254 | <LOD | 73.12275 | <LOD | 157.7333 | 66.21561 | 16.2177 |
| 859.8692 | 13.35382 | 80.19041 | 9.083272 | 45.43073 | 7.083717 | <LOD | 42.32372 | 68.88238 | 4.746 |
| 36.6704 | 3.264179 | <LOD | 7.356702 | <LOD | 17.91471 | <LOD | 47.0549 | 80.11117 | 4.90973 |
| <LOD | 4.819071 | <LOD | 3.353293 | <LOD | 13.35341 | <LOD | 27.47634 | <LOD | 5.684171 |
| 250.3928 | 6.181721 | <LOD | 13.23428 | <LOD | 15.31775 | <LOD | 35.36101 | 11.85168 | 2.75873 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 6.0001 | <LOD | 75.86067 | 310.5552 | 16.48651 | <LOD | 54.80867 | <LOD | 37.64082 |
| <LOD | 6.076894 | <LOD | 74.88489 | <LOD | 24.97995 | <LOD | 63.5811 | 84.37457 | 12.88507 |
| <LOD | 7.772553 | <LOD | 76.66019 | 5842.085 | 77.36414 | <LOD | 78.69135 | <LOD | 39.44423 |
| 495.468 | 12.49359 | 98.34048 | 28.70266 | 33945.5 | 323.528 | 470.8361 | 50.77977 | 439.965 | 16.20777 |
| <LOD | 8.402082 | <LOD | 90.605 | 38075.82 | 368.4885 | <LOD | 121.0147 | <LOD | 45.30193 |
| <LOD | 7.510403 | <LOD | 85.1579 | 37709.16 | 339.4737 | <LOD | 114.6588 | <LOD | 42.539 |
| <LOD | 7.865846 | <LOD | 86.96812 | 35067.41 | 325.1206 | <LOD | 114.9031 | <LOD | 43.27115 |
| <LOD | 7.828588 | <LOD | 85.61498 | 34676.62 | 322.26 | <LOD | 113.5568 | <LOD | 42.83299 |
| <LOD | 6.94674 | <LOD | 80.98759 | 19833.52 | 188.5611 | <LOD | 85.0867 | <LOD | 40.53636 |
| <LOD | 4.636827 | <LOD | 53.40261 | 27396.65 | 164.8534 | <LOD | 61.51552 | <LOD | 26.78942 |
| <LOD | 7.39284 | <LOD | 82.70995 | 27799.08 | 253.5354 | <LOD | 101.3654 | <LOD | 41.40777 |
| <LOD | 7.338625 | <LOD | 81.30413 | 27725.48 | 249.315 | <LOD | 99.52754 | <LOD | 40.59266 |
| <LOD | 7.375899 | <LOD | 83.33897 | 28001.86 | 260.6016 | <LOD | 99.43222 | <LOD | 42.11686 |
| <LOD | 7.207971 | <LOD | 82.05897 | 25893.98 | 238.5218 | <LOD | 95.86813 | <LOD | 40.8938 |
| <LOD | 6.44877 | <LOD | 79.92493 | 18915.53 | 177.6165 | <LOD | 87.22713 | <LOD | 40.04325 |
| | | | | | | | | | |
| <LOD | 5.531673 | <LOD | 72.53803 | 266.9991 | 15.53347 | <LOD | 49.2113 | <LOD | 36.95681 |
| <LOD | 7.527585 | <LOD | 76.53856 | 5541.896 | 73.26537 | <LOD | 74.52831 | <LOD | 39.10062 |
| <LOD | 9.75631 | <LOD | 84.5593 | 28614.13 | 272.7407 | <LOD | 112.6722 | <LOD | 43.05637 |
| <LOD | 7.682121 | <LOD | 81.36853 | 22206.16 | 213.1731 | <LOD | 95.78329 | <LOD | 41.18044 |
| <LOD | 11.74569 | <LOD | 87.77553 | 28653.79 | 277.707 | <LOD | 109.9117 | <LOD | 44.2745 |
| <LOD | 8.24297 | <LOD | 88.29419 | 44258.92 | 415.2591 | <LOD | 128.726 | <LOD | 44.72656 |
| <LOD | 8.560207 | <LOD | 88.55699 | 43532.55 | 407.5145 | <LOD | 127.1807 | <LOD | 44.80301 |
| <LOD | 7.787383 | <LOD | 88.62721 | 42512.82 | 396.4168 | <LOD | 122.4774 | <LOD | 44.5892 |
| <LOD | 7.755671 | <LOD | 83.63046 | 24698.19 | 230.8781 | <LOD | 96.30612 | <LOD | 41.77644 |
| <LOD | 9.23925 | <LOD | 86.59219 | 27623.55 | 267.7177 | <LOD | 100.0226 | <LOD | 43.57758 |
| <LOD | 11.02167 | <LOD | 90.29701 | 39395.1 | 382.7829 | <LOD | 122.7732 | <LOD | 45.31145 |
| <LOD | 7.223318 | <LOD | 85.45467 | 21155.75 | 210.5723 | <LOD | 88.85696 | <LOD | 42.83852 |
| <LOD | 8.646571 | <LOD | 90.47046 | 41572.38 | 404.0741 | <LOD | 124.4467 | <LOD | 45.71005 |
| <LOD | 7.550524 | <LOD | 87.66896 | 32050.68 | 307.4873 | <LOD | 109.8296 | <LOD | 44.07747 |
| <LOD | 7.799107 | <LOD | 84.17339 | 36656.26 | 326.4874 | <LOD | 112.6182 | <LOD | 41.86298 |
| <LOD | 24.03582 | <LOD | 303.7225 | 28264.11 | 955.1872 | <LOD | 367.1441 | <LOD | 151.3706 |
| <LOD | 9.17015 | <LOD | 87.31589 | 24362.53 | 242.6169 | <LOD | 103.711 | <LOD | 43.74336 |
| <LOD | 8.16771 | <LOD | 88.59244 | 39303.04 | 362.3705 | <LOD | 117.5663 | <LOD | 44.47219 |
| | | | | | | | | | |
| <LOD | 5.333833 | <LOD | 76.36964 | 325.6868 | 16.98398 | <LOD | 54.67246 | <LOD | 38.65086 |
| <LOD | 7.387985 | <LOD | 76.56654 | 5806.311 | 77.28514 | <LOD | 80.06931 | <LOD | 39.6253 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 71.70843 | <LOD | 52.48053 | <LOD | 71.71219 | <LOD | 2.068623 | <LOD | 29.57064 |
| <LOD | 71.22875 | <LOD | 53.65111 | <LOD | 72.01222 | <LOD | 1.594278 | <LOD | 30.43712 |
| <LOD | 73.6559 | <LOD | 55.84938 | <LOD | 122.9558 | <LOD | 6.745601 | <LOD | 44.21056 |
| <LOD | 82.67591 | 451.9048 | 22.56514 | <LOD | 194.104 | 30.96837 | 5.706831 | <LOD | 87.58112 |
| <LOD | 85.65479 | <LOD | 63.51656 | <LOD | 184.0643 | 27.44932 | 6.158083 | 338.3997 | 34.57745 |
| <LOD | 80.1163 | <LOD | 59.21475 | <LOD | 177.3008 | 22.96422 | 5.693477 | 221.4592 | 30.2036 |
| <LOD | 81.8845 | <LOD | 60.47739 | <LOD | 176.9842 | <LOD | 16.67344 | 547.1848 | 35.83707 |
| <LOD | 80.93315 | <LOD | 60.0831 | <LOD | 172.7196 | 24.00105 | 5.589635 | 201.2529 | 29.74529 |
| <LOD | 76.7226 | <LOD | 56.39737 | <LOD | 140.4649 | 16.29149 | 4.002701 | 501.5848 | 29.71768 |
| <LOD | 50.65275 | <LOD | 37.7874 | <LOD | 103.2895 | 22.21339 | 3.117733 | 487.0954 | 20.65985 |
| <LOD | 78.43372 | <LOD | 57.37797 | <LOD | 155.8979 | 29.79589 | 4.84211 | 652.2589 | 34.41733 |
| <LOD | 76.92419 | <LOD | 56.53656 | <LOD | 154.0241 | 20.84533 | 4.715365 | 951.4261 | 38.27941 |
| <LOD | 78.92152 | <LOD | 58.31945 | <LOD | 160.7583 | 24.66079 | 4.926543 | 477.2033 | 32.22339 |
| <LOD | 77.64816 | <LOD | 57.25066 | <LOD | 149.8644 | 21.78156 | 4.632927 | 545.8215 | 32.21563 |
| <LOD | 75.73899 | <LOD | 55.29095 | <LOD | 151.3518 | 17.09266 | 3.842097 | 179.2521 | 23.21915 |
| | | | | | | | | | |
| <LOD | 69.11082 | <LOD | 51.94325 | <LOD | 67.1048 | <LOD | 1.931644 | <LOD | 29.72613 |
| <LOD | 73.082 | <LOD | 54.85023 | <LOD | 118.4889 | <LOD | 6.404195 | <LOD | 41.56482 |
| <LOD | 80.73511 | <LOD | 59.99474 | <LOD | 174.3718 | 16.565 | 5.061606 | 462.2139 | 33.36677 |
| <LOD | 77.33068 | <LOD | 57.91295 | <LOD | 148.6325 | <LOD | 12.8861 | 621.6288 | 33.26893 |
| <LOD | 83.32494 | <LOD | 61.39874 | <LOD | 170.8563 | 17.54894 | 5.160715 | 694.7028 | 37.84311 |
| <LOD | 84.26318 | <LOD | 62.57306 | <LOD | 193.018 | 28.29982 | 6.530195 | 337.8632 | 35.55316 |
| <LOD | 83.51086 | <LOD | 62.46625 | <LOD | 189.1813 | 30.17424 | 6.465553 | 308.946 | 34.78809 |
| <LOD | 83.85349 | <LOD | 62.15031 | <LOD | 186.4357 | 23.59863 | 6.319497 | 223.3987 | 32.76159 |
| <LOD | 78.88911 | <LOD | 57.72632 | <LOD | 154.3235 | 21.63166 | 4.563224 | 941.1369 | 38.33286 |
| <LOD | 81.90076 | <LOD | 60.72476 | <LOD | 171.7082 | 15.78974 | 5.025516 | 431.7791 | 32.57784 |
| <LOD | 85.31091 | <LOD | 63.9264 | <LOD | 189.2178 | 28.70134 | 6.318017 | 308.3602 | 34.77561 |
| <LOD | 80.58908 | <LOD | 59.67527 | <LOD | 156.0403 | 15.29616 | 4.352295 | 666.1041 | 34.49905 |
| <LOD | 85.54754 | <LOD | 64.3922 | <LOD | 191.3098 | 22.10193 | 6.475626 | 765.6848 | 42.95163 |
| <LOD | 83.34102 | <LOD | 61.5592 | <LOD | 177.7857 | 29.8717 | 5.534092 | 662.1074 | 37.80959 |
| <LOD | 79.51779 | <LOD | 58.26296 | <LOD | 167.2857 | 42.18447 | 5.647683 | 586.0529 | 35.57307 |
| <LOD | 285.4243 | <LOD | 210.8297 | <LOD | 575.8598 | <LOD | 52.82575 | 626.9467 | 126.6899 |
| <LOD | 82.54361 | <LOD | 61.02654 | <LOD | 160.886 | 21.4326 | 4.809412 | 524.4352 | 33.89436 |
| <LOD | 84.17687 | <LOD | 61.21547 | <LOD | 176.6377 | 28.04352 | 5.997488 | 351.5687 | 33.65917 |
| | | | | | | | | | |
| <LOD | 72.38105 | <LOD | 53.3717 | <LOD | 71.63582 | <LOD | 2.083734 | <LOD | 27.36087 |
| <LOD | 73.50316 | <LOD | 55.91841 | <LOD | 125.5132 | <LOD | 6.677899 | <LOD | 39.97583 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 16.90459 | 5.095963 | <LOD | 2.006573 | <LOD | 1.976223 | 4.793115 | 0.928228 | <LOD | 419.9359 |
| 32.61533 | 5.147301 | <LOD | 2.014836 | <LOD | 1.891692 | <LOD | 2.642497 | <LOD | 406.1771 |
| 41.58223 | 6.235585 | 13.49737 | 1.05325 | <LOD | 2.792917 | 136.6121 | 2.55421 | 5748.445 | 326.1543 |
| 32.51095 | 6.51619 | 25.71076 | 1.431835 | 497.3246 | 7.879591 | 231.49 | 3.785723 | 9621.631 | 486.7331 |
| 32.80673 | 6.731168 | 53.0613 | 1.824993 | <LOD | 2.632398 | 74.94403 | 2.177987 | 7684.579 | 459.5399 |
| 25.18096 | 6.189392 | 55.01344 | 1.726017 | <LOD | 2.617518 | 77.17355 | 2.051795 | 8753.439 | 448.2108 |
| 32.07527 | 6.298174 | 59.99456 | 1.823747 | <LOD | 2.431044 | 79.70301 | 2.120138 | 7177.482 | 433.1666 |
| 23.13782 | 6.318479 | 68.76041 | 1.940657 | <LOD | 2.580373 | 62.37845 | 1.920993 | 6432.674 | 418.3738 |
| 24.69315 | 5.986936 | 51.51048 | 1.597557 | <LOD | 2.322578 | 55.57119 | 1.714622 | 6702.942 | 364.2857 |
| 23.52288 | 3.965032 | 61.57979 | 1.15266 | <LOD | 1.564786 | 69.17611 | 1.249932 | 6779.533 | 257.0528 |
| 18.94886 | 5.992492 | 78.86014 | 1.965421 | <LOD | 2.691598 | 65.33199 | 1.860138 | 6341.458 | 384.4609 |
| 23.11445 | 5.912963 | 67.29291 | 1.801512 | <LOD | 2.323753 | 59.69803 | 1.76889 | 5942.098 | 374.8124 |
| 21.85848 | 6.149621 | 67.33048 | 1.867058 | <LOD | 2.422867 | 70.0264 | 1.953675 | 6678.439 | 399.0803 |
| 21.34078 | 6.070257 | 63.45349 | 1.778025 | <LOD | 2.442 | 69.0198 | 1.899221 | 7146.629 | 385.6111 |
| 32.24458 | 5.887575 | 46.14582 | 1.496059 | <LOD | 2.249694 | 61.92566 | 1.749433 | 7241.38 | 381.2678 |
| | | | | | | | | | |
| 24.37622 | 5.090415 | <LOD | 1.995858 | <LOD | 1.822096 | 6.596426 | 0.949664 | <LOD | 386.1484 |
| 44.64164 | 6.124105 | 12.26587 | 1.009942 | <LOD | 2.729394 | 129.8364 | 2.439264 | 4973.804 | 306.888 |
| 23.83664 | 6.343532 | 58.17876 | 1.850202 | <LOD | 3.940523 | 68.16233 | 2.009058 | 6975.642 | 425.8766 |
| 27.09746 | 6.17187 | 55.19514 | 1.709318 | <LOD | 2.691904 | 63.56729 | 1.868749 | 6868.433 | 382.459 |
| <LOD | 19.54295 | 68.28558 | 2.062612 | <LOD | 5.30571 | 77.85788 | 2.181815 | 7881.424 | 435.6675 |
| 21.80592 | 6.540172 | 79.17661 | 2.150589 | <LOD | 2.703985 | 63.0761 | 2.005688 | 8521.69 | 479.7741 |
| 29.01347 | 6.613164 | 86.98892 | 2.242013 | <LOD | 2.415561 | 69.09212 | 2.074326 | 7069.808 | 456.4818 |
| 23.57854 | 6.49394 | 77.04385 | 2.108069 | <LOD | 2.885729 | 64.24379 | 2.001978 | 7616.166 | 458.0539 |
| 25.3519 | 6.150488 | 60.41674 | 1.752585 | <LOD | 2.434652 | 75.30155 | 1.982698 | 7215.109 | 393.399 |
| <LOD | 19.25473 | 59.34323 | 1.859213 | <LOD | 3.515985 | 66.04505 | 1.994851 | 8042.16 | 437.6749 |
| 25.3671 | 6.734518 | 68.4973 | 2.104808 | <LOD | 4.060699 | 62.49256 | 2.066808 | 7507.448 | 466.4168 |
| 26.67699 | 6.278032 | 66.102 | 1.882075 | <LOD | 2.48627 | 60.0117 | 1.86943 | 8021.354 | 411.9237 |
| 27.52357 | 6.766312 | 83.43737 | 2.263586 | <LOD | 2.927058 | 58.95278 | 2.008413 | 7903.531 | 475.5646 |
| 23.45284 | 6.565973 | 74.06807 | 2.049385 | <LOD | 2.72676 | 78.64533 | 2.156915 | 7777.815 | 445.2484 |
| 27.36697 | 6.134117 | 74.41496 | 1.944342 | <LOD | 2.562308 | 65.00004 | 1.886352 | 6768.06 | 408.9925 |
| <LOD | 67.59789 | 68.8911 | 6.937711 | <LOD | 9.877431 | 82.56885 | 7.649846 | 7513.228 | 1477.1 |
| 33.71998 | 6.532903 | 66.87971 | 1.985242 | <LOD | 3.939886 | 69.63684 | 2.056945 | 7226.714 | 413.526 |
| 30.01708 | 6.465539 | 77.91904 | 2.073289 | <LOD | 2.73467 | 59.84406 | 1.907974 | 7923.926 | 443.8766 |
| | | | | | | | | | |
| 33.46368 | 5.25189 | <LOD | 2.03424 | <LOD | 2.030926 | 5.470997 | 0.952695 | <LOD | 406.6917 |
| 52.61812 | 6.307366 | 13.8793 | 1.062383 | <LOD | 2.574579 | 132.4242 | 2.522195 | 6275.568 | 336.8489 |

| Zr | Zr +/- |
|---|---|
| 22.03104 | 1.488566 |
| 7.345793 | 1.37745 |
| 461.7023 | 4.981443 |
| 277.4119 | 4.023153 |
| 287.4825 | 4.13707 |
| 270.0909 | 3.713735 |
| 237.9997 | 3.532 |
| 274.8628 | 3.821717 |
| 335.1351 | 4.016598 |
| 285.4606 | 2.443494 |
| 282.6909 | 3.694321 |
| 275.4934 | 3.584115 |
| 289.8369 | 3.831589 |
| 333.5933 | 4.077093 |
| 330.2288 | 3.899025 |
| | |
| 14.75239 | 1.427479 |
| 464.4239 | 4.897177 |
| 286.7057 | 3.9226 |
| 320.4945 | 4.035549 |
| 335.2613 | 4.397119 |
| 259.8752 | 3.847398 |
| 298.6427 | 4.1566 |
| 267.4417 | 3.872066 |
| 348.473 | 4.219844 |
| 323.0969 | 4.252028 |
| 267.7825 | 4.009978 |
| 282.6857 | 3.841477 |
| 266.1101 | 4.005211 |
| 346.9422 | 4.496829 |
| 285.2537 | 3.772503 |
| 296.7496 | 14.17313 |
| 304.785 | 4.136773 |
| 315.2138 | 4.176457 |
| | |
| 18.67341 | 1.487806 |
| 460.8322 | 4.990516 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 32.09 | 23-Apr-09 | 7:54:50 | 1 | -0.03 | | | | |
| 64.87 | 23-Apr-09 | 7:57:59 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 65.1 | 23-Apr-09 | 8:01:14 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 65.35 | 23-Apr-09 | 8:04:42 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 63.7 | 23-Apr-09 | 8:07:06 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 65.72 | 23-Apr-09 | 8:10:29 | 6 | | Ex-situ | | BANK4 | 2-2.5 ft |
| 35.46 | 23-Apr-09 | 8:13:13 | 7 | | Ex-situ | | SSP-SW-37 | 2-2.5 ft |
| 66.37 | 23-Apr-09 | 8:18:26 | 8 | | Ex-situ | | SSP-SW-36 | 2-2.5 ft |
| 64.68 | 23-Apr-09 | 8:22:23 | 9 | | Ex-situ | | BANK5 | 1-2 ft |
| 64.02 | 23-Apr-09 | 8:39:14 | 10 | | Ex-situ | | BANK7 | 0-.5 ft |
| 63.25 | 23-Apr-09 | 8:42:55 | 11 | | Ex-situ | | BANK8 | 0-1 ft |
| 64.12 | 23-Apr-09 | 9:01:56 | 12 | | Ex-situ | | BANK6 | 1-2 ft |
| 65.22 | 23-Apr-09 | 9:29:57 | 13 | | Ex-situ | | NSP-SW-26 | 0-1 ft |
| 64.63 | 23-Apr-09 | 9:32:33 | 14 | | Ex-situ | | NSP-SW-27 | 0-1 ft |
| 63.79 | 23-Apr-09 | 9:39:55 | 15 | | Ex-situ | | NSP-SW-28 | 0-1 ft |
| 65.31 | 23-Apr-09 | 9:44:02 | 16 | | Ex-situ | | NSP-SW-29 | 0-1 ft |
| 64.85 | 23-Apr-09 | 9:47:20 | 17 | | Ex-situ | | NSP-FL-5D | 0-1 ft |
| 64.46 | 23-Apr-09 | 9:49:56 | 18 | | Ex-situ | | NSP-FL-4D | 0-1 ft |
| 65.21 | 23-Apr-09 | 9:52:47 | 19 | | Ex-situ | | NSP-FL-5E | 0-1 ft |
| 32.86 | 23-Apr-09 | 11:38:02 | 20 | -0.0273 | | | | |
| 65.57 | 23-Apr-09 | 11:39:52 | 21 | | Ex-situ | Si Blank | | 0-1 ft |
| 64.75 | 23-Apr-09 | 11:42:51 | 22 | | Ex-situ | XRF 408 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 4.727751 | <LOD | 3.20499 | <LOD | 12.95361 | <LOD | 28.07448 | <LOD | 5.748981 |
| 92.13905 | 3.632914 | <LOD | 7.953345 | <LOD | 12.76714 | <LOD | 26.91037 | <LOD | 5.322659 |
| 251.2908 | 6.13 | <LOD | 13.26477 | <LOD | 14.88813 | <LOD | 33.3901 | 16.64236 | 2.877594 |
| 497.0218 | 11.04588 | 459.2962 | 10.54436 | <LOD | 19.63701 | <LOD | 49.78899 | 16.12244 | 4.035389 |
| 12.07712 | 2.666239 | <LOD | 5.776862 | <LOD | 18.05597 | <LOD | 46.93776 | 64.09941 | 4.594909 |
| 41.44611 | 4.136504 | <LOD | 9.000111 | <LOD | 21.95497 | <LOD | 54.45948 | 55.41921 | 5.357316 |
| 13.65161 | 2.463082 | <LOD | 5.20329 | <LOD | 16.21249 | <LOD | 38.53845 | 50.00573 | 3.970596 |
| 9.89968 | 2.357602 | <LOD | 5.171652 | <LOD | 16.55791 | <LOD | 38.49471 | 52.58745 | 4.008228 |
| 95.00922 | 4.093755 | <LOD | 9.256867 | <LOD | 16.43364 | <LOD | 38.41563 | 54.33876 | 4.000515 |
| 24.19209 | 2.655788 | <LOD | 5.874386 | <LOD | 15.39588 | <LOD | 38.04722 | 49.7487 | 3.817201 |
| 11.59269 | 2.399221 | <LOD | 5.413208 | <LOD | 16.55493 | <LOD | 39.38966 | 47.17184 | 3.866073 |
| 111.0446 | 4.62812 | <LOD | 10.07477 | <LOD | 17.67944 | <LOD | 46.28584 | 59.96325 | 4.407274 |
| 2232.771 | 25.67496 | 54.87852 | 14.01826 | 286.243 | 11.24712 | <LOD | 43.35197 | 63.88935 | 4.980152 |
| 146.9551 | 5.114526 | <LOD | 11.3233 | <LOD | 18.70221 | <LOD | 45.01788 | 65.7812 | 4.48959 |
| 14.47293 | 2.757929 | <LOD | 6.246397 | <LOD | 18.3384 | <LOD | 47.31374 | 82.6888 | 5.031589 |
| 29.85092 | 3.029562 | <LOD | 6.744059 | 29.81169 | 6.676023 | <LOD | 45.61245 | 59.88882 | 4.402133 |
| 35.3472 | 3.157084 | <LOD | 6.952968 | <LOD | 18.43733 | <LOD | 46.09178 | 59.47515 | 4.359127 |
| 28.15806 | 2.961111 | <LOD | 6.637988 | 135.2911 | 8.55483 | <LOD | 44.06893 | 65.05965 | 4.610184 |
| <LOD | 4.677023 | <LOD | 3.197338 | <LOD | 12.69215 | <LOD | 27.22825 | <LOD | 6.371694 |
| 241.1424 | 6.007231 | <LOD | 13.30837 | <LOD | 15.2503 | <LOD | 33.43528 | 14.21971 | 2.808978 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.698632 | <LOD | 76.63411 | 381.7856 | 17.972 | <LOD | 49.84152 | <LOD | 38.22983 |
| <LOD | 6.548179 | <LOD | 74.47684 | <LOD | 24.59963 | <LOD | 65.41391 | 96.95435 | 12.89134 |
| <LOD | 7.986052 | <LOD | 75.82527 | 6193.434 | 79.77036 | <LOD | 79.237 | <LOD | 39.35973 |
| 510.6741 | 12.84661 | 143.3573 | 29.09289 | 34702.38 | 333.5566 | 519.2507 | 52.87238 | 428.8157 | 16.42546 |
| <LOD | 7.457694 | <LOD | 90.76997 | 33731.35 | 321.8172 | <LOD | 113.4702 | <LOD | 45.1555 |
| <LOD | 9.374609 | <LOD | 110.7189 | 27661.36 | 332.6266 | <LOD | 140.5363 | <LOD | 55.12762 |
| <LOD | 7.240969 | <LOD | 84.29365 | 17751.46 | 179.2495 | <LOD | 88.41223 | <LOD | 42.12658 |
| <LOD | 6.88899 | <LOD | 83.33292 | 19984.86 | 194.9989 | <LOD | 92.2456 | <LOD | 41.79137 |
| <LOD | 6.51211 | <LOD | 79.95443 | 23138.15 | 216.8778 | <LOD | 93.98664 | <LOD | 40.81695 |
| <LOD | 7.18639 | <LOD | 80.33238 | 22482.42 | 208.2525 | <LOD | 88.33845 | <LOD | 40.49876 |
| <LOD | 6.698375 | <LOD | 85.08283 | 19285.3 | 189.0211 | <LOD | 91.26524 | <LOD | 42.00822 |
| <LOD | 8.328002 | <LOD | 87.05034 | 37673.66 | 346.6648 | <LOD | 112.1637 | <LOD | 43.17639 |
| <LOD | 11.8777 | <LOD | 88.1093 | 25579.53 | 253.1183 | <LOD | 107.4547 | <LOD | 43.5996 |
| <LOD | 8.175388 | <LOD | 86.58341 | 37804.68 | 341.1921 | <LOD | 110.2609 | <LOD | 42.74963 |
| <LOD | 7.481898 | <LOD | 89.04801 | 42741.18 | 395.3315 | <LOD | 125.5849 | <LOD | 44.52789 |
| <LOD | 7.525919 | <LOD | 85.50588 | 37206.72 | 339.4367 | <LOD | 110.8377 | <LOD | 43.10419 |
| <LOD | 7.192302 | <LOD | 85.29681 | 39834.77 | 359.5295 | <LOD | 114.9564 | <LOD | 42.73688 |
| <LOD | 7.169396 | <LOD | 85.95537 | 33037.27 | 304.8715 | <LOD | 108.0475 | <LOD | 42.81285 |
| | | | | | | | | | |
| <LOD | 5.280789 | <LOD | 75.09065 | 589.2552 | 21.38512 | <LOD | 52.01519 | <LOD | 37.88396 |
| <LOD | 7.481266 | <LOD | 76.94011 | 6015.533 | 78.15899 | <LOD | 82.1704 | <LOD | 39.59049 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 72.48422 | <LOD | 52.99538 | <LOD | 71.32709 | <LOD | 2.199313 | <LOD | 31.18166 |
| <LOD | 71.3379 | <LOD | 53.89082 | <LOD | 68.41313 | <LOD | 1.569568 | <LOD | 28.51774 |
| <LOD | 72.68134 | <LOD | 55.35992 | <LOD | 124.8921 | <LOD | 6.623458 | <LOD | 45.07322 |
| <LOD | 83.88855 | 467.0938 | 22.88579 | <LOD | 202.9719 | 26.59788 | 5.80367 | <LOD | 85.34666 |
| <LOD | 85.50405 | <LOD | 62.15379 | <LOD | 180.5006 | 26.53753 | 5.6558 | 648.6889 | 38.02712 |
| <LOD | 104.3444 | <LOD | 75.49838 | <LOD | 207.7895 | 20.29898 | 6.301361 | 497.9125 | 42.28373 |
| <LOD | 79.3177 | <LOD | 58.65213 | <LOD | 147.3006 | 14.62836 | 3.93427 | 442.3631 | 29.38448 |
| <LOD | 79.09199 | <LOD | 58.10741 | <LOD | 151.1323 | 16.11326 | 4.123544 | 410.0617 | 29.05065 |
| <LOD | 76.04112 | <LOD | 56.80536 | <LOD | 149.3137 | 20.90653 | 4.386712 | 422.8826 | 29.57303 |
| <LOD | 75.9555 | <LOD | 56.06739 | <LOD | 143.3478 | <LOD | 12.58888 | 440.2957 | 29.15557 |
| <LOD | 80.07454 | <LOD | 58.13509 | <LOD | 143.6396 | 18.59945 | 4.065321 | 500.9956 | 30.44044 |
| <LOD | 82.43028 | <LOD | 60.56728 | <LOD | 173.2343 | <LOD | 17.31134 | 497.7382 | 35.45978 |
| <LOD | 83.43693 | <LOD | 61.33065 | <LOD | 170.0085 | <LOD | 14.47278 | 251.7846 | 29.51105 |
| <LOD | 81.43965 | <LOD | 59.4707 | <LOD | 171.0267 | 28.18345 | 5.745106 | 430.5453 | 33.78208 |
| <LOD | 84.20794 | <LOD | 61.95496 | <LOD | 186.4243 | 32.07091 | 6.336366 | 542.8215 | 38.045 |
| <LOD | 81.17323 | <LOD | 59.77021 | <LOD | 174.6038 | 28.56704 | 5.751382 | 420.2501 | 33.76436 |
| <LOD | 80.84282 | <LOD | 59.61354 | <LOD | 181.0769 | 26.80793 | 5.915108 | 356.6582 | 33.2348 |
| <LOD | 81.09398 | <LOD | 59.68244 | <LOD | 164.2142 | 18.25475 | 5.362083 | 345.9996 | 31.53853 |
| | | | | | | | | | |
| <LOD | 71.31562 | <LOD | 52.79516 | <LOD | 71.95039 | <LOD | 2.39767 | <LOD | 29.16848 |
| <LOD | 73.23479 | <LOD | 55.36808 | <LOD | 122.2289 | <LOD | 6.484816 | <LOD | 43.5345 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 27.1899 | 5.186991 | <LOD | 2.041792 | <LOD | 2.00658 | 8.236753 | 0.989428 | <LOD | 430.5239 |
| 36.37835 | 5.195364 | <LOD | 2.080119 | <LOD | 2.178564 | <LOD | 2.654103 | <LOD | 389.5002 |
| 56.07633 | 6.211149 | 13.942 | 1.051046 | <LOD | 2.716147 | 130.0952 | 2.473029 | 6028.216 | 331.1128 |
| 42.28207 | 6.640567 | 27.93553 | 1.486597 | 517.9913 | 8.175982 | 228.8865 | 3.805859 | 9556.513 | 500.5571 |
| 36.42321 | 6.584213 | 72.13307 | 2.027864 | <LOD | 2.639682 | 77.98204 | 2.151698 | 7613.895 | 447.6795 |
| 34.40478 | 8.080222 | 68.41764 | 2.431447 | <LOD | 3.380154 | 68.99004 | 2.508449 | 7784.7 | 532.2141 |
| 26.6182 | 6.192724 | 56.58146 | 1.722449 | <LOD | 2.14023 | 47.66947 | 1.682507 | 5885.511 | 369.1917 |
| 26.93103 | 6.140144 | 60.74162 | 1.761283 | <LOD | 2.232881 | 70.35612 | 1.933586 | 7011.117 | 386.8562 |
| 39.65044 | 6.073266 | 57.79738 | 1.705018 | <LOD | 2.476824 | 65.35526 | 1.852958 | 6170.37 | 372.1847 |
| 27.53905 | 5.937568 | 58.7664 | 1.68575 | <LOD | 2.300863 | 59.73473 | 1.758703 | 6510.515 | 365.7109 |
| 19.94608 | 6.086221 | 52.57927 | 1.649371 | <LOD | 2.427204 | 50.61432 | 1.696428 | 5687.122 | 359.7242 |
| 27.7764 | 6.291206 | 57.87811 | 1.804384 | <LOD | 2.491898 | 81.11503 | 2.14247 | 7157.081 | 428.6916 |
| 20.54527 | 6.483564 | 59.74024 | 1.966658 | <LOD | 5.418389 | 68.62732 | 2.082801 | 7023.983 | 424.222 |
| 28.84764 | 6.217782 | 62.46753 | 1.833653 | <LOD | 2.538563 | 74.79221 | 2.033604 | 7304.439 | 424.0503 |
| 31.49767 | 6.526716 | 82.18119 | 2.152545 | <LOD | 2.517511 | 72.854 | 2.089137 | 7551.456 | 455.6407 |
| 33.37203 | 6.306117 | 53.97995 | 1.730263 | <LOD | 2.735326 | 72.07923 | 2.015903 | 7674.368 | 434.6612 |
| 19.5312 | 6.266663 | 60.87476 | 1.821197 | <LOD | 2.549478 | 93.86186 | 2.25752 | 8162.407 | 448.9989 |
| 42.9418 | 6.339908 | 56.87067 | 1.761496 | <LOD | 2.651838 | 78.03127 | 2.075416 | 6268.104 | 402.1927 |
| | | | | | | | | | |
| 19.92213 | 5.142481 | <LOD | 2.054078 | <LOD | 1.889809 | 6.823822 | 0.966819 | <LOD | 407.2541 |
| 51.42824 | 6.226228 | 15.68092 | 1.0818 | <LOD | 2.885925 | 144.4814 | 2.605755 | 5776.498 | 323.9893 |

| Zr | Zr +/- |
|---|---|
| 23.97807 | 1.518218 |
| 7.061374 | 1.383241 |
| 429.071 | 4.702002 |
| 275.2816 | 4.050977 |
| 310.1893 | 4.203648 |
| 327.4714 | 5.321288 |
| 311.0549 | 3.979741 |
| 317.2664 | 3.997643 |
| 281.8654 | 3.677083 |
| 300.6368 | 3.751978 |
| 315.6271 | 3.965395 |
| 239.397 | 3.551362 |
| 291.6687 | 4.054917 |
| 264.2539 | 3.67838 |
| 295.1193 | 4.072388 |
| 272.3787 | 3.771522 |
| 300.1967 | 3.993601 |
| 280.8136 | 3.825051 |
| | |
| 15.10453 | 1.451005 |
| 462.1824 | 4.943727 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 29.58 | 28-Apr-09 | 8:20:10 | 1 | -0.0274 | | | | |
| 62.51 | 28-Apr-09 | 8:22:00 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 63.08 | 28-Apr-09 | 8:24:53 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 63.56 | 28-Apr-09 | 8:28:24 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 61.94 | 28-Apr-09 | 8:30:57 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 66.01 | 28-Apr-09 | 8:34:58 | 6 | | Ex-situ | | NSP-SW-27 | 2-2.5 ft |
| 63.48 | 28-Apr-09 | 8:37:58 | 7 | | Ex-situ | | NSP-SW-30 | 0-1 ft |
| 65.43 | 28-Apr-09 | 8:40:56 | 8 | | Ex-situ | | NSP-SW-31 | 0-1 ft |
| 64.66 | 28-Apr-09 | 8:43:35 | 9 | | Ex-situ | | NSP-SW-32 | 0-1 ft |
| 63.42 | 28-Apr-09 | 8:45:52 | 10 | | Ex-situ | | NSP-SW-33 | 0-1 ft |
| 63.62 | 28-Apr-09 | 8:48:12 | 11 | | Ex-situ | | NSP-SW-34 | 0-1 ft |
| 64.58 | 28-Apr-09 | 8:50:34 | 12 | | Ex-situ | | NSP-FL-5C | 0-1 ft |
| 62.02 | 28-Apr-09 | 10:44:02 | 13 | | Ex-situ | | NSP-FL-4A | 0-1 ft |
| 64.64 | 28-Apr-09 | 10:46:51 | 14 | | Ex-situ | | NSP-FL-4B | 0-1 ft |
| 62.63 | 28-Apr-09 | 10:50:27 | 15 | | Ex-situ | | NSP-FL-4C | 0-1 ft |
| 64.28 | 28-Apr-09 | 10:53:28 | 16 | | Ex-situ | | NSP-FL-5B | 0-1 ft |
| 65.18 | 28-Apr-09 | 10:59:13 | 17 | | Ex-situ | | NSP-FL-5A | 0-1 ft |
| 65.15 | 28-Apr-09 | 11:02:12 | 18 | | Ex-situ | | NSP-FL-4C- | 0-1 ft |
| 64.53 | 28-Apr-09 | 11:04:44 | 19 | | Ex-situ | | NSP-FL-4C- | 0-1 ft |
| 62.92 | 28-Apr-09 | 11:07:10 | 20 | | Ex-situ | | NSP-FL-4C- | 0-1 ft |
| 63.23 | 28-Apr-09 | 11:10:27 | 21 | | Ex-situ | | NSP-FL-4C- | 0-1 ft |
| 61.77 | 28-Apr-09 | 11:32:28 | 22 | | Ex-situ | | NSP-FL-4C | 1-2 ft |
| 31 | 28-Apr-09 | 12:44:09 | 23 | -0.0287 | | | | |
| 63.76 | 28-Apr-09 | 12:45:49 | 24 | | Ex-situ | Si Blank | | 0-1 ft |
| 62.75 | 28-Apr-09 | 12:48:50 | 25 | | Ex-situ | XRF 250 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 4.844031 | <LOD | 3.289939 | <LOD | 12.51331 | <LOD | 28.25856 | <LOD | 5.716114 |
| 94.36894 | 3.606405 | <LOD | 8.016241 | <LOD | 12.90281 | <LOD | 27.55471 | <LOD | 5.887938 |
| 248.7384 | 5.989496 | <LOD | 12.94298 | <LOD | 15.59967 | <LOD | 33.58717 | 13.51286 | 2.757037 |
| 479.6404 | 10.6165 | 458.6462 | 10.21661 | <LOD | 18.65987 | <LOD | 49.4012 | 18.67785 | 3.983734 |
| 12.65745 | 2.572915 | <LOD | 5.609549 | <LOD | 17.72041 | <LOD | 43.02776 | 38.79482 | 3.851097 |
| 14.86344 | 2.71145 | <LOD | 6.041787 | <LOD | 18.83788 | <LOD | 49.29541 | 83.9976 | 4.957633 |
| 46.39173 | 3.452778 | <LOD | 7.626184 | <LOD | 17.85327 | <LOD | 46.06989 | 90.09813 | 5.10796 |
| 26.22991 | 2.961215 | <LOD | 6.698105 | <LOD | 19.1828 | <LOD | 45.16847 | 65.68013 | 4.549235 |
| 19.72924 | 2.685409 | <LOD | 5.72027 | <LOD | 16.25948 | <LOD | 42.34304 | 45.09939 | 3.877445 |
| 11.02547 | 2.493098 | <LOD | 5.558057 | <LOD | 17.28246 | <LOD | 44.52431 | 62.55012 | 4.359088 |
| 39.10889 | 3.337979 | <LOD | 7.253826 | <LOD | 18.75242 | <LOD | 48.88483 | 68.29474 | 4.681447 |
| 13.96259 | 2.628153 | <LOD | 5.698472 | <LOD | 19.08357 | <LOD | 47.7141 | 64.09883 | 4.462924 |
| 22.02822 | 2.804601 | <LOD | 6.208508 | <LOD | 17.56486 | <LOD | 44.86233 | 56.85137 | 4.267944 |
| 492.5799 | 9.429635 | <LOD | 19.55496 | 23.87747 | 6.663507 | <LOD | 47.30545 | 65.76515 | 4.581193 |
| 18.17983 | 2.777358 | <LOD | 5.957616 | <LOD | 19.59094 | <LOD | 47.54882 | 70.27726 | 4.704906 |
| 14.90892 | 2.559834 | <LOD | 5.481167 | <LOD | 16.42127 | <LOD | 42.69018 | 43.74984 | 3.880117 |
| 14.90778 | 2.699844 | <LOD | 5.764588 | <LOD | 18.18124 | <LOD | 46.32759 | 54.85626 | 4.32545 |
| 15.96572 | 2.760971 | <LOD | 5.868993 | <LOD | 18.5433 | <LOD | 48.40205 | 75.49403 | 4.831747 |
| 8.520533 | 2.45312 | <LOD | 5.40126 | <LOD | 18.0894 | <LOD | 46.04738 | 64.55386 | 4.422763 |
| 15.18025 | 2.650269 | <LOD | 5.673831 | <LOD | 18.21697 | <LOD | 45.90699 | 63.44991 | 4.428634 |
| 8.02345 | 2.402672 | <LOD | 5.281113 | <LOD | 17.33429 | <LOD | 45.13103 | 65.36714 | 4.383692 |
| | | | | | | | | | |
| <LOD | 4.883425 | <LOD | 3.352495 | <LOD | 13.41864 | <LOD | 28.80507 | <LOD | 5.399106 |
| 250.4441 | 6.000684 | <LOD | 12.81569 | <LOD | 15.04409 | <LOD | 34.57493 | 14.61332 | 2.775553 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.861346 | <LOD | 76.32743 | 264.4461 | 15.39292 | <LOD | 59.16264 | <LOD | 37.30562 |
| <LOD | 5.934559 | <LOD | 75.19572 | <LOD | 27.97857 | <LOD | 62.68622 | 98.90974 | 12.76527 |
| <LOD | 8.032025 | <LOD | 75.85145 | 6006.783 | 76.73203 | <LOD | 78.98869 | <LOD | 38.55733 |
| 493.9166 | 12.32531 | 105.4084 | 29.10641 | 34079.75 | 320.1094 | 611.1591 | 53.49765 | 459.9024 | 16.26509 |
| <LOD | 8.248116 | <LOD | 87.0144 | 30324.3 | 287.3069 | <LOD | 110.3737 | <LOD | 43.37664 |
| <LOD | 7.873951 | <LOD | 87.25529 | 45716.01 | 408.664 | <LOD | 119.0653 | <LOD | 43.11873 |
| <LOD | 8.128551 | <LOD | 89.38454 | 35071.73 | 327.6238 | <LOD | 116.0458 | <LOD | 43.9974 |
| <LOD | 7.791484 | <LOD | 88.44762 | 35982.14 | 331.8122 | <LOD | 108.5757 | <LOD | 43.14839 |
| <LOD | 7.546396 | <LOD | 85.78346 | 31784.39 | 289.024 | <LOD | 111.9823 | <LOD | 42.19707 |
| <LOD | 7.530816 | <LOD | 87.05467 | 36036.63 | 325.4449 | <LOD | 108.6262 | <LOD | 42.72225 |
| <LOD | 7.889143 | <LOD | 88.69539 | 45228.54 | 411.7117 | <LOD | 127.2211 | <LOD | 44.09252 |
| <LOD | 7.866067 | <LOD | 88.63542 | 40316.71 | 360.7608 | <LOD | 113.5883 | <LOD | 43.28672 |
| <LOD | 7.237378 | <LOD | 88.06327 | 31852.35 | 296.3451 | <LOD | 109.8108 | <LOD | 43.29312 |
| <LOD | 9.267336 | <LOD | 88.17954 | 36838.87 | 337.4678 | <LOD | 115.5635 | <LOD | 43.45113 |
| <LOD | 8.150103 | <LOD | 89.1035 | 39025.35 | 359.2353 | <LOD | 116.7959 | <LOD | 43.70614 |
| <LOD | 7.169887 | <LOD | 85.75568 | 27626.04 | 260.7389 | <LOD | 100.6561 | <LOD | 42.35595 |
| <LOD | 7.801384 | <LOD | 88.53595 | 36164.84 | 337.9337 | <LOD | 111.3602 | <LOD | 43.94276 |
| <LOD | 7.594066 | <LOD | 88.29055 | 41788.63 | 383.817 | <LOD | 121.0124 | <LOD | 43.4961 |
| <LOD | 7.884239 | <LOD | 86.69515 | 35753.52 | 323.0925 | <LOD | 113.2369 | <LOD | 42.58889 |
| <LOD | 7.506298 | <LOD | 87.3582 | 38524.07 | 347.2133 | <LOD | 115.238 | <LOD | 42.82693 |
| <LOD | 7.859399 | <LOD | 85.61621 | 39140.13 | 345.4911 | <LOD | 110.6867 | <LOD | 42.18985 |
| | | | | | | | | | |
| <LOD | 5.466058 | <LOD | 77.34514 | 292.8961 | 16.243 | <LOD | 50.69776 | <LOD | 38.37599 |
| <LOD | 7.715099 | <LOD | 77.44795 | 5726.844 | 74.28515 | <LOD | 74.5686 | <LOD | 38.96876 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 71.68907 | <LOD | 51.86123 | <LOD | 72.09094 | <LOD | 1.963796 | <LOD | 31.36749 |
| <LOD | 70.81101 | <LOD | 53.14199 | <LOD | 70.30113 | <LOD | 1.652582 | <LOD | 30.7836 |
| <LOD | 72.06935 | <LOD | 54.51561 | <LOD | 123.5061 | <LOD | 6.509198 | <LOD | 39.74639 |
| <LOD | 83.44298 | 540.1302 | 22.58188 | <LOD | 200.9987 | 31.3713 | 5.646239 | <LOD | 84.91733 |
| <LOD | 81.40096 | <LOD | 60.41989 | <LOD | 177.8641 | 17.77848 | 5.216549 | 520.1014 | 34.48813 |
| <LOD | 82.14505 | <LOD | 60.0976 | <LOD | 191.1235 | 40.71718 | 6.419874 | 448.6581 | 36.1001 |
| <LOD | 83.81882 | <LOD | 61.02739 | <LOD | 167.6868 | 30.88574 | 5.696184 | 801.4778 | 40.05498 |
| <LOD | 82.5417 | <LOD | 60.28417 | <LOD | 171.1492 | 31.52994 | 5.715802 | 617.9012 | 36.92091 |
| <LOD | 80.29404 | <LOD | 58.58259 | <LOD | 165.6413 | <LOD | 15.15954 | 438.1408 | 32.47403 |
| <LOD | 82.11054 | <LOD | 59.46585 | <LOD | 178.5593 | <LOD | 16.50867 | 517.2442 | 34.70255 |
| <LOD | 83.50874 | <LOD | 61.22192 | <LOD | 199.1463 | <LOD | 19.12118 | 500.7574 | 37.57472 |
| <LOD | 83.71299 | <LOD | 60.00097 | <LOD | 177.9471 | 24.25016 | 5.89851 | 259.4026 | 31.47035 |
| <LOD | 82.79173 | <LOD | 59.89587 | <LOD | 168.177 | <LOD | 15.74754 | 520.5299 | 34.42981 |
| <LOD | 83.18478 | <LOD | 60.30872 | <LOD | 177.7427 | 26.09905 | 5.733012 | 227.5827 | 30.65981 |
| <LOD | 83.9277 | <LOD | 60.98856 | <LOD | 184.5076 | 30.62745 | 5.978209 | 393.6658 | 34.29643 |
| <LOD | 80.98915 | <LOD | 59.49183 | <LOD | 159.3715 | 20.3642 | 4.924992 | 241.6687 | 28.21599 |
| <LOD | 83.85895 | <LOD | 61.03194 | <LOD | 165.9062 | 27.00524 | 5.779542 | 437.3781 | 34.43668 |
| <LOD | 83.43436 | <LOD | 61.13347 | <LOD | 182.2647 | 18.75775 | 6.143724 | 342.7842 | 34.17751 |
| <LOD | 82.10489 | <LOD | 59.04888 | <LOD | 174.7925 | 22.72467 | 5.538126 | 281.604 | 30.8381 |
| <LOD | 81.89339 | <LOD | 59.66505 | <LOD | 173.6013 | 32.70021 | 5.826333 | 395.8481 | 33.47372 |
| <LOD | 80.9393 | <LOD | 58.70129 | <LOD | 167.9739 | 23.93153 | 5.718709 | 540.8279 | 35.17211 |
| | | | | | | | | | |
| <LOD | 72.83302 | <LOD | 52.96361 | <LOD | 69.88158 | <LOD | 1.91975 | <LOD | 30.6453 |
| <LOD | 73.64697 | <LOD | 54.63821 | <LOD | 121.9403 | <LOD | 6.326187 | <LOD | 42.13745 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 16.76819 | 5.004207 | <LOD | 2.014817 | <LOD | 2.014741 | 7.964437 | 0.962579 | <LOD | 432.9923 |
| 18.00598 | 5.005626 | <LOD | 2.021154 | <LOD | 2.276093 | <LOD | 2.592712 | <LOD | 403.7178 |
| 34.72772 | 6.022022 | 13.07846 | 1.017975 | <LOD | 2.659688 | 134.952 | 2.473408 | 5689.678 | 321.8881 |
| 34.97192 | 6.436964 | 26.23259 | 1.423103 | 520.7159 | 8.001595 | 236.7946 | 3.784178 | 9414.515 | 490.5226 |
| 34.64895 | 6.287529 | 53.37784 | 1.736455 | <LOD | 2.474079 | 91.28021 | 2.252519 | 8854.822 | 453.5085 |
| <LOD | 18.78764 | 78.97639 | 2.0596 | <LOD | 2.563196 | 69.67921 | 1.999217 | 7365.257 | 456.2762 |
| <LOD | 18.92652 | 89.40503 | 2.20944 | <LOD | 2.633663 | 73.91018 | 2.072322 | 7252.995 | 422.5167 |
| 20.60797 | 6.333339 | 68.83678 | 1.937324 | <LOD | 2.548619 | 74.53976 | 2.059505 | 7136.865 | 424.8543 |
| 20.98087 | 6.003004 | 49.77219 | 1.641155 | <LOD | 2.401024 | 193.6881 | 3.189698 | 4703.376 | 381.6677 |
| 27.85409 | 6.09292 | 62.11984 | 1.811374 | <LOD | 2.36844 | 77.61413 | 2.04969 | 7643.552 | 437.2813 |
| 32.89537 | 6.463789 | 63.46685 | 1.897446 | <LOD | 2.638794 | 82.65456 | 2.183717 | 8827.834 | 486.5259 |
| 20.45662 | 6.173446 | 65.71788 | 1.869173 | <LOD | 2.596545 | 76.24889 | 2.047134 | 6998.437 | 430.6184 |
| 25.27186 | 6.168889 | 59.25106 | 1.795871 | <LOD | 2.616335 | 73.57077 | 2.028749 | 6205.799 | 407.2852 |
| <LOD | 18.85996 | 63.01606 | 1.882232 | <LOD | 3.283693 | 92.42021 | 2.264978 | 8681.598 | 451.0864 |
| <LOD | 18.79157 | 59.12894 | 1.826143 | <LOD | 2.421993 | 82.82114 | 2.170789 | 7199.824 | 445.9792 |
| 33.84649 | 6.103204 | 57.68828 | 1.761278 | <LOD | 2.331866 | 79.58501 | 2.08133 | 6356.371 | 395.1602 |
| 25.97261 | 6.399658 | 64.2516 | 1.902664 | <LOD | 2.486204 | 76.89859 | 2.113832 | 7359.719 | 422.8517 |
| 26.6848 | 6.477314 | 61.49571 | 1.870585 | <LOD | 2.488147 | 88.17415 | 2.246256 | 7858.795 | 451.8678 |
| <LOD | 18.45326 | 62.12547 | 1.813255 | <LOD | 2.660344 | 81.70069 | 2.097549 | 6951.423 | 423.7682 |
| 30.04609 | 6.228533 | 65.92235 | 1.874359 | <LOD | 2.52007 | 85.27551 | 2.150682 | 7850.244 | 433.9179 |
| 21.95281 | 6.019142 | 65.38635 | 1.832708 | <LOD | 2.39458 | 85.86491 | 2.117145 | 8700.008 | 432.5649 |
| | | | | | | | | | |
| 34.80745 | 5.189161 | <LOD | 1.984179 | <LOD | 1.9455 | 5.05639 | 0.934562 | <LOD | 417.4753 |
| 23.77037 | 5.981936 | 14.27889 | 1.036952 | <LOD | 2.640505 | 130.3797 | 2.426683 | 5831.04 | 321.7262 |

| Zr | Zr +/- |
|---|---|
| 12.99537 | 1.402592 |
| 5.22823 | 1.342431 |
| 447.6212 | 4.749792 |
| 276.9853 | 3.968102 |
| 216.7171 | 3.373342 |
| 289.5191 | 3.921501 |
| 267.8961 | 3.796123 |
| 305.5122 | 4.06073 |
| 212.1137 | 3.284678 |
| 210.6949 | 3.239861 |
| 289.2506 | 3.99186 |
| 267.235 | 3.69924 |
| 216.4893 | 3.324883 |
| 306.9078 | 4.072791 |
| 249.5788 | 3.650245 |
| 173.4807 | 2.96769 |
| 273.9529 | 3.86304 |
| 318.4601 | 4.230318 |
| 286.6187 | 3.833943 |
| 264.623 | 3.689059 |
| 230.7022 | 3.359765 |
| | |
| 14.62065 | 1.439126 |
| 462.6274 | 4.847565 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 23.31 | 13-May-09 | 14:21:54 | 1 | -0.0067 | | | | |
| 64.38 | 13-May-09 | 14:23:31 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 64.43 | 13-May-09 | 14:26:01 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 63.35 | 13-May-09 | 14:28:50 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 62.96 | 13-May-09 | 14:30:54 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 64.8 | 13-May-09 | 14:36:21 | 6 | | Ex-situ | | NSP-TA-FL- | 2-3 ft |
| 65.87 | 13-May-09 | 14:39:05 | 7 | | Ex-situ | | NSP-TA-SW | 2-3 ft |
| 63.67 | 13-May-09 | 14:41:41 | 8 | | Ex-situ | | NSP-TA-SW | 2-3 ft |
| 64.02 | 13-May-09 | 14:44:10 | 9 | | Ex-situ | | NSP-TA-SW | 2-3 ft |
| 65.4 | 13-May-09 | 14:47:44 | 10 | | Ex-situ | | NSP-TA-SW | 0-1 ft |
| 33.01 | 13-May-09 | 14:50:23 | 11 | -0.0094 | | | | |
| 65.72 | 13-May-09 | 14:51:47 | 12 | | Ex-situ | Si Blank | | 0-1 ft |
| 64.59 | 13-May-09 | 14:54:29 | 13 | | Ex-situ | XRF 250 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 4.907994 | <LOD | 3.237547 | <LOD | 13.09725 | <LOD | 28.39377 | <LOD | 5.861049 |
| 95.89796 | 3.66829 | <LOD | 8.209091 | <LOD | 12.76588 | <LOD | 27.60978 | <LOD | 5.478505 |
| 255.1302 | 6.112354 | <LOD | 13.17896 | <LOD | 15.11264 | <LOD | 33.63788 | 10.5041 | 2.671727 |
| 476.1822 | 10.70102 | 440.6669 | 10.19585 | <LOD | 20.02222 | <LOD | 49.89176 | 18.44589 | 4.02874 |
| 6.950701 | 2.188103 | <LOD | 4.629307 | <LOD | 17.00438 | <LOD | 37.20884 | 29.11463 | 3.331573 |
| 8.073358 | 2.220272 | <LOD | 4.587864 | <LOD | 15.32286 | <LOD | 36.63205 | 17.98692 | 2.995732 |
| 10.98562 | 2.41786 | <LOD | 5.267138 | <LOD | 17.05184 | <LOD | 43.02659 | 41.29395 | 3.762113 |
| <LOD | 6.116201 | <LOD | 4.402786 | 41.22674 | 6.196554 | <LOD | 35.10052 | 34.38901 | 3.457082 |
| <LOD | 6.127207 | <LOD | 4.368887 | <LOD | 15.89809 | <LOD | 35.01814 | 11.61693 | 2.761436 |
| | | | | | | | | | |
| <LOD | 5.177289 | <LOD | 3.44515 | <LOD | 12.88409 | <LOD | 27.5058 | <LOD | 5.425296 |
| 254.2158 | 6.162274 | <LOD | 13.29807 | <LOD | 15.24277 | <LOD | 33.89811 | 13.44228 | 2.786732 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 6.460863 | <LOD | 75.0454 | 525.4244 | 20.22482 | <LOD | 56.29726 | <LOD | 37.59774 |
| <LOD | 6.344151 | <LOD | 73.87027 | <LOD | 25.96589 | <LOD | 63.95834 | 107.5104 | 12.78462 |
| <LOD | 7.799905 | <LOD | 77.11008 | 5762.264 | 75.27965 | <LOD | 76.84489 | <LOD | 39.1124 |
| 472.7276 | 12.2077 | <LOD | 88.00349 | 34718.17 | 329.7724 | 584.1288 | 53.84495 | 438.8326 | 16.33616 |
| <LOD | 6.746931 | <LOD | 82.21043 | 18618.94 | 180.5202 | <LOD | 85.4012 | <LOD | 40.93376 |
| <LOD | 6.40624 | <LOD | 83.11249 | 16465.63 | 165.7881 | <LOD | 89.87651 | <LOD | 41.17779 |
| <LOD | 6.960762 | <LOD | 84.74983 | 28600.92 | 262.9448 | <LOD | 103.1765 | <LOD | 42.26277 |
| <LOD | 6.199767 | <LOD | 80.92825 | 15141.39 | 151.8997 | <LOD | 81.61388 | <LOD | 40.70182 |
| <LOD | 7.131143 | <LOD | 81.57397 | 12277.07 | 130.7587 | <LOD | 78.7765 | <LOD | 40.85201 |
| <LOD | 5.963159 | <LOD | 75.25902 | 350.2076 | 17.41243 | <LOD | 49.33819 | <LOD | 38.07777 |
| <LOD | 7.320764 | <LOD | 77.86703 | 5732.366 | 75.78926 | <LOD | 78.63191 | <LOD | 39.71809 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 71.42592 | <LOD | 52.55685 | <LOD | 71.08446 | <LOD | 2.327661 | <LOD | 32.96589 |
| <LOD | 70.25302 | <LOD | 53.45363 | <LOD | 68.71792 | <LOD | 1.738997 | <LOD | 31.62211 |
| <LOD | 73.26547 | <LOD | 54.92103 | <LOD | 125.3418 | <LOD | 6.503674 | <LOD | 43.98798 |
| <LOD | 84.26091 | 510.9268 | 22.78147 | <LOD | 205.6921 | 26.69176 | 5.740859 | <LOD | 85.20447 |
| <LOD | 77.59748 | <LOD | 56.77007 | <LOD | 127.2243 | <LOD | 11.62621 | 214.7972 | 24.27421 |
| <LOD | 78.15675 | <LOD | 57.56151 | <LOD | 143.2186 | <LOD | 10.90898 | 244.2787 | 24.7921 |
| <LOD | 80.24348 | <LOD | 58.31532 | <LOD | 158.2467 | <LOD | 14.58148 | 480.784 | 32.22643 |
| <LOD | 76.75163 | <LOD | 56.2204 | <LOD | 112.3078 | <LOD | 10.33556 | 655.5375 | 31.20001 |
| <LOD | 77.25714 | <LOD | 56.83026 | <LOD | 121.7735 | <LOD | 9.466137 | 271.1512 | 23.79297 |
| <LOD | 71.45854 | <LOD | 53.06548 | <LOD | 70.7153 | <LOD | 2.206445 | <LOD | 27.76496 |
| <LOD | 74.30952 | <LOD | 55.52981 | <LOD | 121.9878 | <LOD | 6.453117 | <LOD | 41.01726 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 17.23033 | 5.077034 | <LOD | 2.027196 | <LOD | 1.920771 | 5.549495 | 0.938176 | <LOD | 420.4698 |
| 31.23767 | 5.134269 | <LOD | 2.103286 | <LOD | 2.180334 | <LOD | 2.597991 | <LOD | 395.1826 |
| 39.66335 | 6.167851 | 13.38781 | 1.033495 | <LOD | 2.603988 | 132.2012 | 2.467152 | 5962.135 | 329.2349 |
| 32.56617 | 6.508055 | 26.14679 | 1.438363 | 511.5634 | 8.016852 | 228.8807 | 3.758661 | 9650.889 | 502.6157 |
| 30.61952 | 5.761308 | 46.71092 | 1.540045 | <LOD | 2.42575 | 79.02342 | 1.983704 | 2896.371 | 296.1157 |
| 27.35002 | 5.792437 | 44.24645 | 1.523199 | <LOD | 2.227786 | 77.43562 | 1.988592 | 5420.755 | 354.1091 |
| 20.22415 | 5.903262 | 51.54625 | 1.645632 | <LOD | 2.525438 | 87.57869 | 2.126002 | 4592.667 | 368.5702 |
| 27.13454 | 5.570487 | 42.06033 | 1.45625 | <LOD | 2.24189 | 73.9147 | 1.902707 | 1471.19 | 249.8355 |
| 33.67347 | 5.697635 | 37.62365 | 1.406314 | <LOD | 2.190002 | 58.12576 | 1.743353 | 2539.634 | 281.3881 |
| 30.58562 | 5.222002 | <LOD | 2.103441 | <LOD | 2.053146 | 6.187647 | 0.962797 | <LOD | 427.2947 |
| 40.24365 | 6.200549 | 14.83346 | 1.068522 | <LOD | 2.596945 | 135.9662 | 2.527692 | 5852.647 | 325.0345 |

| Zr | Zr +/- |
|---|---|
| 18.70505 | 1.460121 |
| 6.799814 | 1.370787 |
| 505.2197 | 5.203191 |
| 273.7675 | 3.991732 |
| 133.6441 | 2.539331 |
| 119.6695 | 2.46121 |
| 171.0392 | 2.892848 |
| 64.60931 | 1.989035 |
| 90.50613 | 2.191671 |
| | |
| 17.17263 | 1.473266 |
| 478.5958 | 5.064355 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 31.32 | 14-May-09 | 8:37:11 | 1 | -0.0111 | | | | |
| 63.58 | 14-May-09 | 8:40:41 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 65.23 | 14-May-09 | 8:43:36 | 3 | | Ex-situ | XRF 250 | | 0-1 ft |
| 64.18 | 14-May-09 | 8:47:08 | 4 | | Ex-situ | XRF 101 | | 0-1 ft |
| 63.91 | 14-May-09 | 8:50:39 | 5 | | Ex-situ | | NSP-FL-1A | 0-1 ft |
| 64.31 | 14-May-09 | 8:54:18 | 6 | | Ex-situ | | NSP-FL-1D | 1-2 ft |
| 64.56 | 14-May-09 | 8:56:45 | 7 | | Ex-situ | | NSP-FL-2D | 1-2 ft |
| 64.52 | 14-May-09 | 8:59:48 | 8 | | Ex-situ | | NSP-FL-3A | 1-2 ft |
| 65.59 | 14-May-09 | 9:03:19 | 9 | | Ex-situ | | NSP-FL-3C | 1-2 ft |
| 66.15 | 14-May-09 | 9:07:08 | 10 | | Ex-situ | | NSP-FL-3B | 1-2 ft |
| 63.78 | 14-May-09 | 9:09:49 | 11 | | Ex-situ | | NSP-SW-35 | 0-1 ft |
| 52.63 | 14-May-09 | 9:13:24 | 12 | | Ex-situ | | NSP-SW-36 | 0-1 ft |
| 60.61 | 14-May-09 | 9:15:43 | 13 | | Ex-situ | | NSP-SW-36 | 0-1 ft |
| 63.12 | 14-May-09 | 9:19:18 | 14 | | Ex-situ | | NSP-SW-37 | 0-1 ft |
| 33.04 | 14-May-09 | 9:22:12 | 15 | -0.0083 | | | | |
| 65.43 | 14-May-09 | 9:23:39 | 16 | | Ex-situ | | NSP-FL-1A | 0-1 ft |
| 65.64 | 14-May-09 | 9:25:55 | 17 | | Ex-situ | | NSP-FL-1A | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.112009 | <LOD | 3.462408 | <LOD | 13.34595 | <LOD | 28.1739 | <LOD | 6.016747 |
| 259.1052 | 6.24315 | <LOD | 13.56162 | <LOD | 15.57793 | <LOD | 32.77893 | 12.42852 | 2.767239 |
| 87.74484 | 3.524089 | <LOD | 7.780072 | <LOD | 12.05928 | <LOD | 26.61309 | <LOD | 5.158592 |
| 489.0166 | 10.80253 | 428.4879 | 10.16212 | <LOD | 18.81658 | <LOD | 48.4734 | 12.45367 | 3.83379 |
| 219.2703 | 5.968955 | <LOD | 13.21389 | <LOD | 17.09502 | <LOD | 41.98676 | 51.69036 | 4.015369 |
| 277.5582 | 6.895757 | <LOD | 14.9528 | 76.49625 | 7.532861 | <LOD | 44.50874 | 54.9666 | 4.322258 |
| 546.6899 | 10.21787 | <LOD | 21.27849 | 270.6187 | 11.01835 | <LOD | 47.47611 | 89.35832 | 5.452125 |
| 8.876567 | 2.312198 | <LOD | 5.060121 | <LOD | 15.75998 | <LOD | 39.87852 | 39.81261 | 3.677499 |
| 16.53394 | 2.506286 | <LOD | 5.23268 | <LOD | 18.06819 | <LOD | 38.92107 | 27.38671 | 3.38533 |
| 46.4848 | 3.139954 | <LOD | 7.219039 | <LOD | 16.95468 | <LOD | 39.61911 | 31.3457 | 3.40556 |
| 27097.04 | 296.3646 | 633.0522 | 62.79978 | 2883.324 | 49.16059 | 315.7602 | 30.4753 | 255.8398 | 13.46936 |
| 8160.397 | 80.70409 | 227.8908 | 28.8815 | 753.7415 | 18.74873 | <LOD | 56.46398 | 112.402 | 7.125604 |
| 18.01056 | 2.665419 | <LOD | 5.789265 | <LOD | 17.90141 | <LOD | 43.95498 | 55.27896 | 4.172744 |
| | | | | | | | | | |
| <LOD | 4.934249 | <LOD | 3.446805 | <LOD | 13.3063 | <LOD | 28.79028 | <LOD | 5.643841 |
| 253.1008 | 6.168576 | <LOD | 13.31518 | <LOD | 15.2222 | <LOD | 33.28376 | 11.22926 | 2.712257 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.913545 | <LOD | 78.1399 | 328.163 | 17.0883 | <LOD | 52.88909 | <LOD | 38.79693 |
| <LOD | 7.543952 | <LOD | 75.62564 | 5971.932 | 78.11401 | <LOD | 80.42875 | <LOD | 39.09647 |
| <LOD | 6.143384 | <LOD | 73.99497 | <LOD | 27.15609 | <LOD | 65.27412 | 107.3734 | 12.64911 |
| 471.5266 | 12.20396 | 103.9317 | 28.90432 | 33862.41 | 323.2971 | 492.2091 | 51.25523 | 461.813 | 16.31771 |
| <LOD | 7.760895 | <LOD | 83.51845 | 28722.91 | 263.2856 | <LOD | 99.24433 | <LOD | 41.61162 |
| <LOD | 8.204273 | <LOD | 86.48889 | 34373.21 | 315.2388 | <LOD | 105.1773 | <LOD | 42.99317 |
| <LOD | 8.70632 | <LOD | 88.24827 | 41405.59 | 382.2899 | <LOD | 116.2272 | <LOD | 43.62566 |
| <LOD | 7.332075 | <LOD | 82.98174 | 22325.18 | 213.7619 | <LOD | 93.22548 | <LOD | 41.61997 |
| <LOD | 6.967576 | <LOD | 83.55855 | 20134.37 | 197.1244 | <LOD | 93.04593 | <LOD | 41.93027 |
| <LOD | 6.534355 | <LOD | 82.61881 | 24961.08 | 229.1549 | <LOD | 93.95878 | <LOD | 41.01376 |
| <LOD | 41.34876 | <LOD | 117.3133 | 32505.71 | 401.7262 | 632.2451 | 76.79029 | <LOD | 57.67083 |
| <LOD | 20.74921 | <LOD | 95.27336 | 31152.73 | 323.0471 | <LOD | 141.0426 | <LOD | 47.8279 |
| <LOD | 7.569322 | <LOD | 85.69223 | 35310.9 | 317.7519 | <LOD | 112.5492 | <LOD | 42.50049 |
| | | | | | | | | | |
| <LOD | 5.534253 | <LOD | 75.65618 | 362.2152 | 17.71843 | <LOD | 49.12842 | <LOD | 38.19431 |
| <LOD | 6.963241 | <LOD | 74.53252 | 5679.301 | 75.61156 | <LOD | 81.24523 | <LOD | 38.92581 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 73.52094 | <LOD | 53.43136 | <LOD | 71.14859 | <LOD | 2.205746 | <LOD | 33.27903 |
| <LOD | 72.70799 | <LOD | 55.5178 | <LOD | 124.5739 | <LOD | 6.819561 | <LOD | 46.16304 |
| <LOD | 70.20368 | <LOD | 53.16152 | <LOD | 68.97925 | <LOD | 1.619619 | <LOD | 26.0253 |
| <LOD | 82.98109 | 450.7888 | 22.59443 | <LOD | 194.1144 | 32.20016 | 5.715186 | <LOD | 86.0937 |
| <LOD | 79.05404 | <LOD | 57.93969 | <LOD | 149.3931 | <LOD | 14.43198 | 692.2141 | 35.4185 |
| <LOD | 81.46402 | <LOD | 59.5774 | <LOD | 167.3965 | 21.98558 | 5.480597 | 241.2772 | 29.84259 |
| <LOD | 83.05547 | <LOD | 61.23846 | <LOD | 183.8366 | 25.62088 | 6.179833 | 197.0881 | 31.64957 |
| <LOD | 78.75278 | <LOD | 58.02578 | <LOD | 163.0101 | <LOD | 12.77862 | 159.4392 | 24.72143 |
| <LOD | 79.0938 | <LOD | 58.32414 | <LOD | 137.8569 | <LOD | 12.23199 | 274.818 | 26.5719 |
| <LOD | 78.04393 | <LOD | 56.94602 | <LOD | 138.4473 | 16.30863 | 4.477606 | 351.0603 | 28.37154 |
| <LOD | 110.3776 | <LOD | 80.00183 | <LOD | 278.3257 | <LOD | 21.55447 | 456.6989 | 51.96874 |
| <LOD | 90.51891 | <LOD | 66.43185 | <LOD | 192.8669 | <LOD | 17.35265 | 422.9738 | 38.11449 |
| <LOD | 80.67395 | <LOD | 58.87073 | <LOD | 164.4327 | 23.07803 | 5.47541 | 491.5837 | 33.99962 |
| | | | | | | | | | |
| <LOD | 71.72382 | <LOD | 53.21268 | <LOD | 71.37397 | <LOD | 2.228451 | <LOD | 32.98447 |
| <LOD | 71.63726 | <LOD | 55.40196 | <LOD | 123.2787 | <LOD | 6.466782 | <LOD | 43.91257 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 23.47449 | 5.181547 | <LOD | 2.083611 | <LOD | 2.041711 | 6.367144 | 0.963451 | <LOD | 415.4824 |
| 35.22511 | 6.207092 | 17.4374 | 1.116963 | <LOD | 2.689429 | 141.4952 | 2.588587 | 6028.111 | 330.9622 |
| 26.03786 | 5.085328 | <LOD | 2.055485 | <LOD | 2.208413 | <LOD | 2.633103 | <LOD | 406.601 |
| 40.8485 | 6.550019 | 23.18467 | 1.39143 | 493.3764 | 7.852188 | 224.4117 | 3.721981 | 9613.431 | 486.8305 |
| <LOD | 17.43463 | 49.61918 | 1.623142 | <LOD | 2.68528 | 60.67687 | 1.822389 | 4910.26 | 359.5749 |
| 31.1044 | 6.138937 | 63.60235 | 1.859076 | <LOD | 2.844963 | 80.62418 | 2.107402 | 7201.438 | 418.1477 |
| <LOD | 19.14009 | 69.58013 | 2.008254 | <LOD | 3.55264 | 73.11385 | 2.093019 | 7677.691 | 453.0208 |
| 23.02391 | 5.863514 | 47.85279 | 1.591269 | <LOD | 2.425688 | 78.82431 | 2.027373 | 8356.34 | 419.3066 |
| 31.49478 | 5.890035 | 48.46168 | 1.603695 | <LOD | 2.260591 | 87.27035 | 2.124533 | 4118.146 | 331.7056 |
| <LOD | 16.88424 | 40.75214 | 1.458365 | <LOD | 2.223825 | 49.58866 | 1.647788 | 4625.575 | 336.8144 |
| <LOD | 24.93284 | 14.29251 | 3.314167 | <LOD | 21.20332 | 73.32837 | 3.421073 | 9361.993 | 663.0584 |
| <LOD | 20.65407 | 46.47737 | 2.257732 | <LOD | 10.54414 | 76.70532 | 2.489218 | 5590.87 | 452.0331 |
| 23.78022 | 6.052174 | 64.24677 | 1.827592 | <LOD | 2.500069 | 75.23152 | 2.010751 | 6908.456 | 407.427 |
| | | | | | | | | | |
| 24.03353 | 5.1811 | <LOD | 2.050613 | <LOD | 2.0669 | 6.107281 | 0.959365 | <LOD | 390.0316 |
| 46.41723 | 6.283199 | 15.75733 | 1.087995 | <LOD | 2.576413 | 136.2151 | 2.538939 | 5698.939 | 324.8155 |

| Zr | Zr +/- |
|---|---|
| 22.05729 | 1.506565 |
| 484.1149 | 5.124104 |
| <LOD | 4.03504 |
| 265.2309 | 3.927726 |
| 133.5782 | 2.582295 |
| 189.1429 | 3.105423 |
| 287.8645 | 3.998878 |
| 138.2688 | 2.632518 |
| 117.5978 | 2.485981 |
| 119.6836 | 2.412752 |
| 185.2965 | 4.599431 |
| 188.6276 | 3.581054 |
| 222.021 | 3.306722 |
| | |
| 15.02312 | 1.455124 |
| 501.663 | 5.252818 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 30.9 | 18-May-09 | 8:40:24 | 1 | -0.0288 | | | | |
| 64.38 | 18-May-09 | 8:47:31 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 63.96 | 18-May-09 | 8:50:39 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 64.96 | 18-May-09 | 8:53:48 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 63.86 | 18-May-09 | 8:56:30 | 5 | | Ex-situ | | NSP-FL-1A | 0-1 ft |
| 63.52 | 18-May-09 | 8:59:53 | 6 | | Ex-situ | | NSP-SW-36 | 1-2 ft |
| 65.29 | 18-May-09 | 9:04:25 | 7 | | Ex-situ | | NSP-FL-3A | 2-2.5 ft |
| 63.97 | 18-May-09 | 9:07:45 | 8 | | Ex-situ | | NSP-SW-5 | 1-1.5 ft |
| 65.09 | 18-May-09 | 9:10:48 | 9 | | Ex-situ | | NSP-SW-4 | 1-1.5 ft |
| 66.76 | 18-May-09 | 9:14:21 | 10 | | Ex-situ | | NSP-SW-3 | 1-1.5 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.238437 | <LOD | 3.367525 | <LOD | 13.5953 | <LOD | 28.34132 | <LOD | 6.140226 |
| 96.39101 | 3.695924 | <LOD | 8.203031 | <LOD | 13.0778 | <LOD | 28.24474 | <LOD | 5.854916 |
| 253.7402 | 6.091409 | <LOD | 13.17169 | <LOD | 15.27037 | <LOD | 32.94238 | 11.95982 | 2.714658 |
| 478.3711 | 10.79561 | 438.5847 | 10.27895 | <LOD | 19.0952 | <LOD | 50.16914 | <LOD | 11.47359 |
| 10.86422 | 2.390173 | <LOD | 5.260132 | <LOD | 15.95633 | <LOD | 41.75953 | 33.0667 | 3.499371 |
| 7.729659 | 2.129738 | <LOD | 4.650856 | <LOD | 14.4164 | <LOD | 36.70541 | 16.53422 | 2.866003 |
| 12.89484 | 2.654094 | <LOD | 5.6281 | <LOD | 16.88893 | <LOD | 47.56583 | 61.8263 | 4.457477 |
| 12.4769 | 2.671598 | <LOD | 5.724193 | <LOD | 18.37406 | <LOD | 49.29363 | 58.81753 | 4.441967 |
| 11.90698 | 2.700878 | <LOD | 5.830642 | <LOD | 17.33615 | <LOD | 48.17542 | 67.61895 | 4.729131 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.352095 | <LOD | 76.45943 | 391.9751 | 18.12049 | <LOD | 55.00385 | <LOD | 38.05869 |
| <LOD | 6.610278 | <LOD | 75.62093 | 51.11998 | 10.65899 | <LOD | 63.65246 | 133.8268 | 12.95335 |
| <LOD | 8.190453 | <LOD | 74.00391 | 5889.37 | 76.28194 | <LOD | 78.9838 | <LOD | 38.37193 |
| 469.645 | 12.28217 | <LOD | 87.80464 | 34457.41 | 330.9532 | 570.7566 | 53.47603 | 439.5432 | 16.43409 |
| <LOD | 7.252224 | <LOD | 83.58186 | 32565.7 | 291.1698 | <LOD | 109.3828 | <LOD | 41.40231 |
| <LOD | 6.22442 | <LOD | 81.44894 | 14081.63 | 144.0933 | <LOD | 81.96544 | <LOD | 40.48838 |
| <LOD | 7.6437 | <LOD | 87.74609 | 40664.97 | 371.9073 | <LOD | 118.7849 | <LOD | 43.58953 |
| <LOD | 8.259668 | <LOD | 87.57157 | 42458.72 | 389.0456 | <LOD | 119.3049 | <LOD | 43.77448 |
| <LOD | 7.626612 | <LOD | 87.76608 | 41137.26 | 388.0655 | <LOD | 123.1528 | <LOD | 44.49585 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 72.0201 | <LOD | 52.87745 | <LOD | 71.02184 | <LOD | 2.24588 | <LOD | 31.51841 |
| <LOD | 71.57999 | <LOD | 53.93945 | <LOD | 69.85881 | <LOD | 1.688052 | <LOD | 30.56677 |
| <LOD | 70.44248 | <LOD | 54.28809 | <LOD | 126.131 | <LOD | 6.428045 | <LOD | 43.26287 |
| <LOD | 84.24416 | 467.2568 | 22.84637 | <LOD | 198.2905 | <LOD | 17.13462 | <LOD | 89.68334 |
| <LOD | 78.62118 | <LOD | 57.6407 | <LOD | 153.0834 | <LOD | 15.31293 | 395.4377 | 31.33315 |
| <LOD | 76.78102 | <LOD | 56.56802 | <LOD | 118.4056 | <LOD | 9.861784 | 256.5804 | 23.85582 |
| <LOD | 82.98215 | <LOD | 60.80928 | <LOD | 182.3352 | 35.92819 | 6.113737 | 441.4671 | 35.34036 |
| <LOD | 83.27192 | <LOD | 61.25123 | <LOD | 181.5564 | <LOD | 18.5333 | 459.5055 | 36.17519 |
| <LOD | 83.69068 | <LOD | 62.28022 | <LOD | 187.142 | 26.08419 | 6.280799 | 510.7601 | 37.67261 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 26.14429 | 5.164962 | <LOD | 2.125946 | <LOD | 2.10506 | 6.415349 | 0.958551 | <LOD | 430.8875 |
| 30.65239 | 5.15985 | <LOD | 2.098845 | <LOD | 2.135505 | <LOD | 2.607822 | <LOD | 418.867 |
| 37.92401 | 6.164189 | 16.33383 | 1.082124 | <LOD | 2.663895 | 131.5445 | 2.459713 | 6118.264 | 331.8294 |
| 43.06722 | 6.640512 | 25.30683 | 1.440784 | 497.0222 | 7.953153 | 250.2403 | 3.996825 | 10024.81 | 498.7868 |
| 26.44823 | 5.849942 | 51.74419 | 1.63222 | <LOD | 2.327231 | 65.25605 | 1.860193 | 4766.686 | 362.1882 |
| 27.90372 | 5.610018 | 40.04519 | 1.430855 | <LOD | 2.086097 | 45.23946 | 1.578714 | 873.9765 | 249.7559 |
| 46.73365 | 6.511813 | 64.06611 | 1.889749 | <LOD | 2.46743 | 78.7132 | 2.121881 | 8433.42 | 456.9276 |
| 30.45904 | 6.417053 | 68.28025 | 1.956326 | <LOD | 2.628894 | 80.00413 | 2.151138 | 6792.93 | 438.3785 |
| 20.40709 | 6.53512 | 59.81498 | 1.889707 | <LOD | 2.527656 | 78.64143 | 2.187078 | 7836.696 | 462.758 |

| Zr | Zr +/- |
|---|---|
| 18.85008 | 1.475294 |
| 7.717386 | 1.385015 |
| 510.0587 | 5.234922 |
| 280.1039 | 4.093465 |
| 150.2381 | 2.694338 |
| 75.1213 | 2.051161 |
| 306.1834 | 4.096598 |
| 270.6226 | 3.837499 |
| 273.263 | 3.955401 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 22.83 | 27-May-09 | 8:22:29 | 1 | -0.008 | | | | |
| 63.29 | 27-May-09 | 8:25:27 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 62.72 | 27-May-09 | 8:29:03 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 64.3 | 27-May-09 | 8:32:16 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 31.44 | 27-May-09 | 8:40:00 | 5 | -0.0277 | | | | |
| 63 | 27-May-09 | 8:41:19 | 6 | | Ex-situ | XRF 408 | | 0-1 ft |
| 66 | 27-May-09 | 8:45:30 | 7 | | Ex-situ | | NSP-FL-1A | 1-1.5 ft |
| 64.67 | 27-May-09 | 8:49:02 | 8 | | Ex-situ | | NSP-FL-1B | 1-1.5 ft |
| 65.78 | 27-May-09 | 8:54:21 | 9 | | Ex-situ | | NSP-FL-1C | 1-1.5 ft |
| 64.12 | 27-May-09 | 8:57:58 | 10 | | Ex-situ | | NSP-FL-2A | 0-1 ft |
| 64.08 | 27-May-09 | 9:01:06 | 11 | | Ex-situ | | NSP-FL-2B | 1-1.5 ft |
| 62.94 | 27-May-09 | 9:03:25 | 12 | | Ex-situ | | NSP-FL-2B | 1-1.5 ft |
| 63.33 | 27-May-09 | 9:07:41 | 13 | | Ex-situ | | NSP-FL-2B | 1-1.5 ft |
| 64.62 | 27-May-09 | 9:11:50 | 14 | | Ex-situ | | NSP-FL-2C | 1-1.5 ft |
| 64.68 | 27-May-09 | 9:14:57 | 15 | | Ex-situ | | NSP-SW-1 | 1-1.5 ft |
| 63.51 | 27-May-09 | 9:18:21 | 16 | | Ex-situ | | NSP-SW-2 | 1-1.5 ft |
| 63.63 | 27-May-09 | 9:22:06 | 17 | | Ex-situ | | NSP-SW-38 | 0-1 ft |
| 63.83 | 27-May-09 | 9:25:27 | 18 | | Ex-situ | | NSP-SW-39 | 1-1.5 ft |
| 63.37 | 27-May-09 | 9:29:05 | 19 | | Ex-situ | | NSP-SW-40 | 1-1.5 ft |
| 32.5 | 27-May-09 | 9:34:33 | 20 | -0.0279 | | | | |
| 64.6 | 27-May-09 | 9:36:48 | 21 | | Ex-situ | Si Blank | | 0-1 ft |
| 65.49 | 27-May-09 | 9:39:39 | 22 | | Ex-situ | XRF 408 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.020398 | <LOD | 3.332647 | <LOD | 12.74774 | <LOD | 28.49856 | <LOD | 5.834931 |
| 107.5943 | 3.837839 | <LOD | 8.226887 | <LOD | 12.95086 | <LOD | 28.40589 | <LOD | 5.260532 |
| 248.2879 | 6.046378 | <LOD | 13.17895 | <LOD | 15.79654 | <LOD | 34.19028 | 12.70934 | 2.759763 |
| 505.6025 | 10.8673 | 423.2011 | 10.08263 | <LOD | 18.72697 | <LOD | 48.17505 | 15.26352 | 3.886235 |
| 130.1531 | 4.809737 | <LOD | 10.865 | <LOD | 17.54887 | <LOD | 40.95825 | 49.42672 | 4.03091 |
| 8.760901 | 2.186714 | <LOD | 4.588948 | <LOD | 14.8624 | <LOD | 35.73478 | 12.23592 | 2.752886 |
| <LOD | 6.236483 | <LOD | 4.518955 | <LOD | 15.47752 | <LOD | 36.65949 | 24.10274 | 3.171329 |
| <LOD | 5.837223 | <LOD | 4.167211 | <LOD | 14.38345 | <LOD | 34.53001 | 12.23216 | 2.668629 |
| 366.3199 | 7.488533 | <LOD | 15.84691 | 57.12798 | 6.57036 | <LOD | 36.22947 | 31.35194 | 3.434449 |
| 247.401 | 6.022798 | <LOD | 13.24967 | 70.42311 | 6.705839 | <LOD | 35.5211 | 29.83434 | 3.354401 |
| 192.3952 | 5.47271 | <LOD | 12.13774 | 66.32522 | 6.86093 | <LOD | 38.73309 | 33.38614 | 3.544397 |
| 11.5184 | 2.383484 | <LOD | 5.221471 | <LOD | 16.41186 | <LOD | 40.9542 | 41.99903 | 3.744052 |
| 11.35008 | 2.412865 | <LOD | 5.292773 | <LOD | 16.05723 | <LOD | 40.78686 | 46.22139 | 3.87019 |
| 17.07926 | 2.687925 | <LOD | 5.819395 | <LOD | 17.23994 | <LOD | 44.32912 | 62.92545 | 4.398849 |
| 8.955706 | 2.355295 | <LOD | 5.120292 | <LOD | 15.87303 | <LOD | 42.39734 | 43.76908 | 3.779484 |
| 7.273316 | 2.286131 | <LOD | 5.00191 | <LOD | 16.91212 | <LOD | 40.2428 | 37.69755 | 3.637326 |
| 8.277914 | 2.412739 | <LOD | 5.256458 | <LOD | 17.04609 | <LOD | 45.0551 | 55.87225 | 4.164966 |
| <LOD | 4.934256 | <LOD | 3.423478 | <LOD | 13.35444 | <LOD | 28.05699 | <LOD | 6.034957 |
| 259.9336 | 6.0991 | <LOD | 13.268 | <LOD | 14.98687 | <LOD | 33.79911 | 21.24348 | 2.967 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.956327 | <LOD | 75.51518 | 315.3752 | 16.53249 | <LOD | 56.14935 | <LOD | 37.82929 |
| <LOD | 6.848258 | <LOD | 75.84146 | 80.34356 | 11.33164 | <LOD | 62.96257 | 114.769 | 12.88199 |
| <LOD | 7.589874 | <LOD | 76.3956 | 5875.593 | 76.47572 | <LOD | 81.92117 | <LOD | 39.27272 |
| | | | | | | | | | |
| 486.6389 | 12.25705 | <LOD | 85.27928 | 34399.32 | 323.6483 | 524.271 | 51.6035 | 471.668 | 16.15624 |
| <LOD | 7.300749 | <LOD | 84.65047 | 26312.79 | 249.5094 | <LOD | 100.1599 | <LOD | 42.06638 |
| <LOD | 7.00284 | <LOD | 81.54337 | 16288.93 | 161.081 | <LOD | 82.74633 | <LOD | 40.35122 |
| <LOD | 6.426617 | <LOD | 81.44932 | 17959.39 | 176.8839 | <LOD | 87.50156 | <LOD | 40.8389 |
| <LOD | 6.629182 | <LOD | 79.0444 | 13706.26 | 137.6196 | <LOD | 74.40316 | <LOD | 39.44267 |
| <LOD | 7.739458 | <LOD | 80.40034 | 17537.16 | 170.4228 | <LOD | 85.69841 | <LOD | 40.42842 |
| <LOD | 7.336803 | <LOD | 79.61146 | 17731.19 | 169.148 | <LOD | 83.59139 | <LOD | 39.66422 |
| <LOD | 7.800197 | <LOD | 82.47498 | 22962.26 | 213.5604 | <LOD | 92.21318 | <LOD | 40.80319 |
| <LOD | 7.100971 | <LOD | 83.57358 | 25798.85 | 240.4616 | <LOD | 101.5667 | <LOD | 41.57889 |
| <LOD | 7.279149 | <LOD | 83.58876 | 29233.8 | 268.2704 | <LOD | 100.1854 | <LOD | 42.0229 |
| <LOD | 8.002565 | <LOD | 86.85788 | 36489.77 | 331.4984 | <LOD | 111.872 | <LOD | 42.93331 |
| <LOD | 7.32542 | <LOD | 82.66039 | 30676.22 | 276.9961 | <LOD | 104.9766 | <LOD | 41.2645 |
| <LOD | 7.056905 | <LOD | 83.56485 | 26987.25 | 248.7188 | <LOD | 97.74928 | <LOD | 41.78721 |
| <LOD | 7.028513 | <LOD | 83.89131 | 38171.68 | 339.7208 | <LOD | 113.2467 | <LOD | 42.04313 |
| | | | | | | | | | |
| <LOD | 6.206616 | <LOD | 75.12007 | 321.0846 | 16.6636 | <LOD | 54.86237 | <LOD | 37.79426 |
| <LOD | 8.257414 | <LOD | 74.83569 | 6063.093 | 76.96494 | <LOD | 81.1822 | <LOD | 38.52759 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 71.44814 | <LOD | 52.50086 | <LOD | 73.7364 | <LOD | 2.043006 | <LOD | 32.18128 |
| <LOD | 71.90079 | <LOD | 53.62168 | <LOD | 70.63054 | <LOD | 1.741127 | <LOD | 29.18967 |
| <LOD | 73.16502 | <LOD | 55.13414 | <LOD | 124.5226 | <LOD | 6.594688 | <LOD | 44.26764 |
| | | | | | | | | | |
| <LOD | 81.92104 | 488.9756 | 22.45073 | <LOD | 196.5222 | 34.695 | 5.703404 | <LOD | 85.71732 |
| <LOD | 79.65727 | <LOD | 58.74913 | <LOD | 153.2565 | <LOD | 14.21334 | 402.5412 | 30.85164 |
| <LOD | 76.2538 | <LOD | 56.32977 | <LOD | 127.2404 | <LOD | 10.68436 | 233.4213 | 23.89468 |
| <LOD | 77.65353 | <LOD | 57.03597 | <LOD | 136.1121 | <LOD | 11.41892 | 485.4346 | 29.49801 |
| <LOD | 74.53406 | <LOD | 54.89166 | <LOD | 116.6211 | <LOD | 9.644175 | 188.9137 | 21.61645 |
| <LOD | 76.04318 | <LOD | 56.24404 | <LOD | 124.4599 | <LOD | 11.00738 | 418.1212 | 27.75054 |
| <LOD | 75.33974 | <LOD | 55.29253 | <LOD | 123.267 | <LOD | 10.7775 | 289.0209 | 24.96735 |
| <LOD | 78.02702 | <LOD | 56.8263 | <LOD | 141.0061 | <LOD | 12.66603 | 328.4323 | 27.55861 |
| <LOD | 79.01758 | <LOD | 57.86975 | <LOD | 151.7256 | <LOD | 13.70326 | 447.7697 | 30.95081 |
| <LOD | 79.52052 | <LOD | 58.37077 | <LOD | 151.7181 | <LOD | 14.66292 | 394.4486 | 30.76683 |
| <LOD | 81.69504 | <LOD | 59.59551 | <LOD | 160 | 23.71551 | 5.638419 | 310.7258 | 31.55696 |
| <LOD | 78.47592 | <LOD | 57.68897 | <LOD | 154.3874 | <LOD | 15.0008 | 480.6145 | 32.33774 |
| <LOD | 79.12009 | <LOD | 57.88892 | <LOD | 147.9903 | <LOD | 13.99094 | 323.6842 | 28.85213 |
| <LOD | 79.22472 | <LOD | 58.5917 | <LOD | 165.6185 | 33.57634 | 5.728283 | 409.2891 | 33.13968 |
| | | | | | | | | | |
| <LOD | 71.50571 | <LOD | 52.43666 | <LOD | 68.34663 | <LOD | 2.126806 | <LOD | 30.2199 |
| <LOD | 71.55272 | <LOD | 54.09937 | <LOD | 121.3123 | <LOD | 6.511215 | <LOD | 39.59224 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 18.15928 | 5.06429 | <LOD | 2.054993 | <LOD | 1.945637 | 5.433527 | 0.932182 | <LOD | 437.6785 |
| 31.41314 | 5.115007 | <LOD | 2.055414 | <LOD | 2.143069 | <LOD | 2.609745 | <LOD | 425.067 |
| 37.13269 | 6.090399 | 15.51112 | 1.070464 | <LOD | 2.625921 | 135.2944 | 2.502697 | 5693.685 | 324.7638 |
| | | | | | | | | | |
| 26.54443 | 6.402047 | 22.7054 | 1.37056 | 508.4054 | 7.903942 | 237.4494 | 3.799639 | 10007.21 | 491.7101 |
| 36.72561 | 6.12091 | 55.67508 | 1.7342 | <LOD | 2.690361 | 73.72987 | 2.010892 | 4785.802 | 365.9154 |
| 25.1334 | 5.671056 | 36.70622 | 1.385918 | <LOD | 2.210832 | 55.11144 | 1.698364 | 2592.433 | 290.525 |
| 31.7889 | 5.776711 | 44.82604 | 1.523315 | <LOD | 2.06576 | 60.65912 | 1.791062 | 4298.711 | 329.1921 |
| <LOD | 16.21105 | 30.25216 | 1.256123 | <LOD | 2.003662 | 47.02968 | 1.56 | 2212.392 | 266.3887 |
| 27.65994 | 5.659869 | 42.93425 | 1.49077 | <LOD | 2.898263 | 61.03562 | 1.772205 | 2783.789 | 288.9239 |
| 23.29509 | 5.55572 | 43.48908 | 1.469163 | <LOD | 2.497246 | 64.97502 | 1.785709 | 2769.84 | 285.6501 |
| 30.29763 | 5.696982 | 45.66451 | 1.531338 | <LOD | 2.45214 | 49.38116 | 1.647737 | 4279.485 | 335.6126 |
| <LOD | 17.41863 | 43.22805 | 1.522921 | <LOD | 2.30126 | 58.11158 | 1.785947 | 6642.104 | 383.5953 |
| 24.88745 | 5.913201 | 60.17291 | 1.759291 | <LOD | 2.182504 | 75.00223 | 1.990704 | 5503.795 | 370.9786 |
| 24.10716 | 6.223755 | 58.54478 | 1.779784 | <LOD | 2.520635 | 74.16888 | 2.027809 | 6215.547 | 395.7212 |
| 19.80276 | 5.873838 | 50.82588 | 1.623888 | <LOD | 2.574635 | 82.83432 | 2.059551 | 6251.8 | 382.3688 |
| 23.41575 | 5.918706 | 55.23111 | 1.682354 | <LOD | 2.372342 | 74.51595 | 1.969982 | 4484.732 | 351.3141 |
| 29.67407 | 6.050611 | 58.31307 | 1.747939 | <LOD | 2.622471 | 64.32072 | 1.881709 | 6236.692 | 401.3061 |
| | | | | | | | | | |
| 21.08549 | 5.098735 | <LOD | 1.975852 | <LOD | 2.001302 | 7.209023 | 0.964315 | <LOD | 401.9645 |
| 31.26075 | 6.041966 | 12.16717 | 1.001077 | <LOD | 2.432639 | 132.8345 | 2.447316 | 6064.592 | 323.1406 |

| Zr | Zr +/- |
|---|---|
| 19.08814 | 1.457898 |
| 8.047598 | 1.375025 |
| 441.2594 | 4.755249 |
| | |
| 270.0304 | 3.924563 |
| 185.9066 | 3.053486 |
| 125.8497 | 2.441992 |
| 109.7747 | 2.363655 |
| 70.75677 | 1.968554 |
| 113.1385 | 2.352483 |
| 119.613 | 2.363872 |
| 97.83795 | 2.24564 |
| 145.0281 | 2.664658 |
| 156.8341 | 2.779242 |
| 276.998 | 3.784388 |
| 182.0058 | 2.952185 |
| 196.7637 | 3.062646 |
| 205.8147 | 3.171045 |
| | |
| 18.18567 | 1.45922 |
| 486.1061 | 5.011997 |

# Appendix B-4

# Chains of Custody

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: SHAW E+I | Project Manager: TIM LEAHY | Date: 3/31/09 | Chain of Custody Number: 117232 |
| Address: 2113 EMMORTON PARK Rd. | Telephone Number (Area Code)/Fax Number: (410)612-6357 (410)612-6351 | Lab Number: | Page 1 of 1 |
| City: Edgewood / State: Md. / Zip Code: 21040 | Site Contact: Steve KRITAK | Lab Contact: L. LAVER | |
| Project Name and Location (State): RFAAP - SWMU 39, VA | Carrier/Waybill Number: UPS/ 1Z18 842 32 52 | | |
| Contract/Purchase Order/Quote No.: — | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Analysis: TAL-Metals, 6010B/7470A | SVOC's, 8270C | VOC's | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 DW15 | 3/31/09 | 1330 | | | | X | X | | | | | | X | X | X | |
| 39 DW16 | 3/31/09 | 1335 | | | | X | X | | | | | | X | X | X | |
| 39 DW17 | 3/31/09 | 1340 | | | | X | X | | | | | | X | X | X | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By | Date: 3/31/09 | Time: 1600 | 1. Received By | Date | Time |
| 2. Relinquished By | Date | Time | 2. Received By | Date | Time |
| 3. Relinquished By | Date | Time | 3. Received By | Date | Time |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw Environmental | ~~Sally Bore~~ / Tim Leahy | 4-27-09 | 173864 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 1 of 2** |
| 2113 Emmorton Park Rd | ~~410-612-6222~~ 2 / 410-612-6526 / 410-612-6551 | | |
| **City** | **State** / **Zip Code** | **Site Contact** | **Lab Contact** |
| Edgewood | MD 21040 | | Linda Lobar |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| Radford AAP SWMU 39 Virginia | UPS | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Other | TAL Analysis | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 395C01 SSP-SW-1 0-1 | 4.14.09 | 10:19 | | | | X | | | | | | | X | 1 | |
| 395C02 SSP-SW-11 0-1' | 4.8.09 | 1:38 | | | | X | | | | | | | X | 1 | |
| 395C03 SSP-SW-21 0-1' | 4.21.09 | 3:30 | | | | X | | | | | | | X | 1 | |
| 395C04 SSP-SW-33 0-1' | 4.22.09 | 7:49 | | | | X | | | | | | | X | 1 | |
| 395C05 SSP-SW-36 1-2' | 4.23.09 | 7:46 | | | | X | | | | | | | X | 1 | |
| 395C06 SSP-SW-25 0-1' | 4.22.09 | 7:32 | | | | X | | | | | | | X | 1 | |
| 395C07 SSP-R-1M 0-1' | 4.16.09 | 9:00 | | | | X | | | | | | | X | 1 | |
| 395C08 SSP-R-2C 1-2' | 4.21.09 | 11:10 | | | | X | | | | | | | X | 1 | |
| 395C09 SSP-R-30 0-1' | 4.14.09 | 11:23 | | | | X | | | | | | | X | 1 | |
| 395C10 SSP-R-3E 1-2' | 4.21.09 | 2:15 | | | | X | | | | | | | X | 1 | |
| 39TM5C01 SSP-R-3E 1-2' | 4.21.09 | 2:15 | | | | X | | | | | | | X | 1 | Dupe of 395C10 |
| 395C11 SSP-RL-3N 0-1 | 4.21.09 | 3:01 | | | | X | | | | | | | X | 1 | |

**Possible Hazard Identification**
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 4.27.09 | 1:04 | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw Environmental | Tim Leahy | 4-27-09 | 106797 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 2 of 2** |
| 2113 Emmorton Park Rd | 410-612-6351 Fax / 410-612-6326 phone | | |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | |
| Edgewood / MD / 21040 | | Linda Laber | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| Radford AAP Sump 39 Virginia | UPS | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Other | Analysis (Attach list if more space is needed): TAL Metals | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39SC12 SSP-FL-4A 0-1' | 4.21.09 | 10:31 | | | | X | | | | | | | X | 1 | |
| 39SC13 SSP-FL-3L 0-1' | 4.13.09 | 1:36 | | | | X | | | | | | | X | 1 | |
| 39SC14 NSP-SW-11 0-1' | 4.13.09 | 9:45 | | | | X | | | | | | | X | 1 | |
| 39SC15 NSP-SW-15 0-1' | 4.13.09 | 8:49 | | | | X | | | | | | | X | 1 | |
| 39SC16 NSP-SW-22 0-1' | 4.13.09 | 2:09 | | | | X | | | | | | | X | 1 | |
| 39SC17 NSP-FL-1G 0-1' | 4.9.09 | 2:25 | | | | X | | | | | | | X | 1 | |
| 39SC18 NSP-FL-2L 0-1' | 4.13.09 | 10:25 | | | | X | | | | | | | X | 1 | |
| 39SC19 NSP-FL-3E 0-1' | 4.14.09 | 8:42 | | | | X | | | | | | | X | 1 | |
| 39TMSC02 NSP-FL-3E 0-1' | 4.14.09 | 8:42 | | | | X | | | | | | | X | 1 | Dupe of 39SC19 |
| 39SC20 NSP-FL-2H 0-1' | 4.13.09 | 2:05 | | | | X | | | | | | | X | 1 | |
| 39SC21 NSP-SW-28 0-1' | 4.23.09 | 9:07 | | | | X | | | | | | | X | 1 | |
| 39SC22 NSP-FL-5D 0-1' | 4.23.09 | 9:07 | | | | X | | | | | | | X | 1 | |

**Possible Hazard Identification**
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| 1. Relinquished By | Date | Time | 1. Received By | Date | Time |
|---|---|---|---|---|---|
| 2. Relinquished By | Date | Time | 2. Received By | Date | Time |
| 3. Relinquished By | Date | Time | 3. Received By | Date | Time |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw E&I | Tim Leahy | 5-12-09 | 132233 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 1 of 2** |
| 2113 Emmorton Park Rd | 410-612-6326 / 410-612-6351 | | |
| **City** | **State** / **Zip Code** | **Site Contact** | **Lab Contact** |
| Edgewood | MD / 21040 | | Linda Lavoie |
| **Project Name and Location (State)** | | **Carrier/Waybill Number** | |
| Radford AAP SWMU 39 VA | | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | None | Analysis (Attach list if more space is needed): Dioxins (Modified) | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 395C01 SSP-SW-1 0-1' | 5.12.09 | 9:00 | | | | X | | | | | | | X | X | |
| X 395C02 SSP-SW-11 0-1' | 5.12.09 | 9:07 | | | | X | | | | | | | X | X | |
| 395C03 SSP-SW-21 0-1' | 5.12.09 | 9:15 | | | | X | | | | | | | X | X | |
| X 395C04 SSP-SW-33 0-1' | 5.12.09 | 9:21 | | | | X | | | | | | | X | X | |
| 395C05 SSP-SW-36 1-2' | 5.12.09 | 9:19 | | | | X | | | | | | | X | X | |
| X 395C06 SSP-SW-25 0-1' | 5.12.09 | 9:26 | | | | X | | | | | | | X | X | |
| 395C07 SSP-FL-1M 0-1' | 5.12.09 | 9:11 | | | | X | | | | | | | X | X | |
| 395C08 SSP-FL-2C 1-2' | 5.12.09 | 9:25 | | | | X | | | | | | | X | X | |
| X 395C09 SSP-FL-30 0-1 | 5.12.09 | 9:05 | | | | X | | | | | | | X | X | |
| 395C10 SSP-FL-3E 1-2' | 5.12.09 | 9:17 | | | | X | | | | | | | X | X | |
| 39TMSC01 SSP-FL-3E 1-2' | 5.12.09 | 9:18 | | | | X | | | | | | | X | X | Dupe |
| X 395C11 SSP-FL-21 0-1 | 5.12.09 | 9:13 | | | | X | | | | | | | X | X | |

**Possible Hazard Identification**

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**

☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| | Relinquished By | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|---|
| 1. | | 5.12.09 | | | | |
| 2. | | | | | | |
| 3. | | | | | | |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Linda.Lauer@testamerica...

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw E&I | Tim Leahy | 5.12.09 | 132232 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 2 of 2** |
| 2113 Emmorton Park Dr | 410-612-6326 / 410-612-6351 | | |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | **Analysis (Attach list if more space is needed)** |
| Edgewood / MD / 21040 | | Linda Lauer | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| Radford AAP SWMU39 VA | | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Analysis: Dioxin/Furans | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 395C12 SSP-FL-4A 0-1' | 5.12.09 | 9:27 | | | | | | | | | | | X | |
| X 395C13 SSP-FL-3L 0-1' | 5.12.09 | 9:09 | | | | | | | | | | | X | |
| 395C14 NSP-SW-11 0-1' | 5.12.09 | 9:55 | | | | | | | | | | | X | |
| X 395C15 NSP-SW-15 0-1' | 5.12.09 | [illegible] 9:57 | | | | | | | | | | | X | |
| 395C16 NSP-SW-22 0-1' | 5.12.09 | 10:00 | | | | | | | | | | | X | |
| X 395C17 NSP-FL-1G 0-1' | 5.12.09 | 9:53 | | | | | | | | | | | X | |
| 395C18 NSP-FL-2E 0-1' | 5.12.09 | 9:58 | | | | | | | | | | | X | |
| 395C19 NSP-FL-3E 0-1' | 5.12.09 | 9:49 | | | | | | | | | | | X | |
| 39TMSC02 NSP-FL-3E 0-1' | 5.12.09 | 9.50 | | | | | | | | | | | X | Dupe |
| X 395C20 NSP-FL-2H 0-1' | 5.12.09 | 10:03 | | | | | | | | | | | X | |
| 395C21 NSP-SW-28 0-1' | 5.12.09 | 9:16 | | | | | | | | | | | X | |
| 395C22 NSP-FL-5D 0-1' | 5.12.09 | 9:15 | | | | | | | | | | | X | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| 1. Relinquished By | Date | Time | 1. Received By | Date | Time |
|---|---|---|---|---|---|
| | 5.12.09 | | | | |
| 2. Relinquished By | Date | Time | 2. Received By | Date | Time |
| | | | | | |
| 3. Relinquished By | Date | Time | 3. Received By | Date | Time |
| | | | | | |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E&I | Project Manager: Tim Leahy | Date: 5.27.09 | Chain of Custody Number: 123006 |
| Address: 218 Emerson Park Rd | Telephone Number (Area Code)/Fax Number: 410-612-6326 / 410-612-6351 | | Lab Number: |
| City: Edgewood; State: MD; Zip Code: 21040 | Site Contact: | Lab Contact: Linda Loves | Page 1 of 1 |
| Project Name and Location (State): Radford AAP Sump 39 VA | Carrier/Waybill Number: UPS | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Other | Analysis (Attach list if more space is needed): Metals | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39SC23 NSP-SW-34 0-1' | 4.28.09 | 8:15 | | | | X | | | | | | | X | 1 | |
| 39SC24 NSP-FL-4C 1-2' | 4.28.09 | 11:21 | | | | X | | | | | | | X | 1 | |
| 39SC25 NSP-FL-center 2-3' | 5.13.09 | 1:21 | | | | X | | | | | | | X | 1 | |
| MMDDYYR1 NSP-FL-2C 0-1 | 4.13.09 | 10:25 | | | | X | | | | | | | X | 3 | MS/MSD |
| 39SC26 NSP-SW-1 MS' | 5.27.09 | 6:19 | | | | X | | | | | | | X | 1 | |
| 39TMSC03 NSP-SW-1 MS | 5.27.09 | 8:19 | | | | X | | | | | | | X | 1 | Dupe |
| 39SC27 NSP-FL-2B MS | 5.27.09 | 9:05 | | | | X | | | | | | | X | 1 | |
| MMDDYYR2 NSP-FL-2B MS | 5.27.09 | 8:05 | | | | X | | | | | | | X | 3 | MS/MSD |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other_____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | | | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E+I | Project Manager: TIM LEAHY | Date: 8/3/09 | Chain of Custody Number: 109539 |
| Address: 2113 EMMORTON PARK Rd. | Telephone Number (Area Code)/Fax Number: 410-612-6332 | Lab Number: | Page _____ of _____ |
| City: Edgewood / State: Md. / Zip Code: 21040 | Site Contact: ERIC MALTREK | Lab Contact: LINDA LAVER | Analysis (Attach list if more space is needed) |
| Project Name and Location (State): RAAP - SWMU 39 Radford Va. | Carrier/Waybill Number: UPS / J228 593 3482 | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | TAL METALS/pH/% MOISTURE | TCL SVOCS/TCL PEST/PCBs/PAHs | TCL VOC's | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JWB GF02 | 8/3/09 | 1000 | | | | X | X | | | | | | X | X | X | |
| JWB GF03 | | 1015 | | | | X | X | | | | | | X | X | X | |
| JWB GF04 | | 1030 | | | | X | X | | | | | | X | X | X | |
| JWB GF05 | | 1045 | | | | X | X | | | | | | X | X | X | |
| JWB GF06 | | 1100 | | | | X | X | | | | | | X | X | X | |
| JWB GF07 | | 1115 | | | | X | X | | | | | | X | X | X | |
| JWB GF08 | | 1130 | | | | X | X | | | | | | X | X | X | |
| JWB GF09 | | 1145 | | | | X | X | | | | | | X | X | X | |
| JWB GF10 | | 1200 | | | | X | X | | | | | | X | X | X | |
| JWB GF11 | | 1215 | | | | X | X | | | | | | X | X | X | |
| JWB GF12 | | 1230 | | | | X | X | | | | | | X | X | X | |
| JWB GF13 | 8/3/09 | 1245 | | | | X | X | | | | | | X | X | X | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By: [signature] | 8/3/09 | 3:00PM | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments: TEMP. Blank inside

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

**TestAmerica**
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E+I | Project Manager: TIM LEAHY | Date: 8/3/09 | Chain of Custody Number: 103540 |
| Address: 2113 Emmorton Park Rd. | Telephone Number (Area Code)/Fax Number: 410-612-6332 | Lab Number: | Page _____ of _____ |
| City: Edgewood / State: Md. / Zip Code: 21040 | Site Contact: Eric Walarek | Lab Contact: Linda Laver | |
| Project Name and Location (State): RAAP - SWMU 39 Radford, Va. | Carrier/Waybill Number: UPS/ J228 593 3482 | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Analysis: TAL METALS / pH / % MOIST. | TCL SVOCs, ACL PEST & PCB / PAHs | TCL VOCs | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JWB GF14 | 8/3/09 | 1300 | | | | X | X | | | | | | X | X | X | |
| JWB GF15 | 8/3/09 | 1315 | | | | X | X | | | | | | X | X | X | |
| JWB GF16 | 8/3/09 | 1330 | | | | X | X | | | | | | X | X | X | |
| JWB GF17 | 8/3/09 | 1345 | | | | X | X | | | | | | X | X | X | |
| JWB GF18 | 8/3/09 | 1400 | | | | X | X | | | | | | X | X | X | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By: [signature] | 8/3/09 | 3:00PM | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments
TEMP. Blank inside

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E+I | Project Manager: Tim LEAHY | Date: 8/6/09 | Chain of Custody Number: 119539 |
| Address: 2113 Emmorton Park Rd. | Telephone Number (Area Code)/Fax Number: 410-612-6332/410-612-6351 | Lab Number: | Page _____ of _____ |
| City: Edgewood / State: Md. / Zip Code: 21040 | Site Contact: S. KRITAK | Lab Contact: Linda Lauer | |
| Project Name and Location (State): RAAP-SWMU 39 Radford, Va. | Carrier/Waybill Number: UPS | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | TAL METALS, pH, Hexavalent Chrome | TCL SVOC's, PEST+PCB's, DAI's | TCL VOC's |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JWB-GF 19 | 8/6/09 | 0800 | | | | X | X | | | | | | X | X | X |
| JWB-GF 20 | | 0815 | | | | X | X | | | | | | X | X | X |
| JWB-GF 21 | | 0830 | | | | X | X | | | | | | X | X | X |
| JWB-GF 22 | | 0845 | | | | X | X | | | | | | X | X | X |
| JWB-GF 23 | | 0900 | | | | X | X | | | | | | X | X | X |
| JWB-GF 24 | | 0915 | | | | X | X | | | | | | X | X | X |
| JWB-GF 25 | | 0930 | | | | X | X | | | | | | X | X | X |
| JWB-GF 26 | | 0945 | | | | X | X | | | | | | X | X | X |
| JWB-GF ~~26~~ 27 | | 1000 | | | | X | X | | | | | | X | X | X |
| JWB-GF 28 | | 1015 | | | | X | X | | | | | | X | X | X |
| JWB-GF 29 | | 1030 | | | | X | X | | | | | | X | X | X |
| JWB-GF 30 | 8/6/09 | 1045 | | | | X | X | | | | | | X | X | X |

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time |
|---|---|---|
| 1. Relinquished By: Steve Kritak | 8/6/09 | 3:00pm |
| 2. Relinquished By: | | |
| 3. Relinquished By: | | |

| | Date | Time |
|---|---|---|
| 1. Received By: | | |
| 2. Received By: | | |
| 3. Received By: | | |

Comments
TEMP. BLANK INSIDE - SAMPLES SENT IN 2 COOLERS. 1 CHAIN - COPY IN SECOND COOLER
DATE WRONG ON ALL 8 OZ. JARS SHOULD BE 8/6/09 NOT 8/5/09 Steve Kritak 8/6/09

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| SHAW E+I | TIM LEAHY | 8/6/09 | 119598 |

| Address | Telephone Number (Area Code)/Fax Number | Lab Number |
|---|---|---|
| 2113 EMMORTON PARK | 410-612-6332 / 410-612-6351 | Page _____ of _____ |

| City | State | Zip Code | Site Contact | Lab Contact |
|---|---|---|---|---|
| EDGEWOOD | MD | 21040 | S. KRITAK | LINDA LAVER |

| Project Name and Location (State) | Carrier/Waybill Number |
|---|---|
| RAAP-SWMU 39 RADFORD Va. | UPS |

Contract/Purchase Order/Quote No.

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Analysis: TAL METALS DIS | TAL METALS | 8260 VOC'S | TCL VOA 5 | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JWB GF-31 | 8/6/09 | 1100 | | | | X | | | | | | | X | X | X | | |
| JWB GF-32 | | 1115 | | | | X | | | | | | | X | X | X | | |
| JWB GF-33 | | 1130 | | | | X | | | | | | | X | X | X | | |
| JWB GF-34 | | 1145 | | | | X | | | | | | | X | X | X | | |
| JWB GF-35 | 8/6/09 | 1200 | | | | X | | | | | | | X | X | X | | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| 1. Relinquished By | Date | Time | 1. Received By | Date | Time |
|---|---|---|---|---|---|
| Steven Kritak | 8/6/09 | 3:00PM | | | |
| 2. Relinquished By | Date | Time | 2. Received By | Date | Time |
| | | | | | |
| 3. Relinquished By | Date | Time | 3. Received By | Date | Time |
| | | | | | |

Comments
TEMP BLANK INSIDE - 8oz JARS Labeled wrong should be 8/6/09 not 8/5/09 Steve Kritak 8/6/09
SAMPLES SPLIT INTO 2 COOLERS - COPY OF CHAIN W/ SECOND COOLER

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Shaw E+I / Radford Arsenal Proj. | Project Manager: Tim LEAHY | Date: 9/29/09 | Chain of Custody Number: 103646 |
| Address: 2113 Emmorton PARK Road | Telephone Number (Area Code)/Fax Number: 410-612-6332 / 410-612-6351 | Lab Number: | Page 1 of 1 |
| City: Edgewood / State: Md. / Zip Code: 21040 | Site Contact: Steve KEITAH | Lab Contact: Linda Lauer | |
| Project Name and Location (State): Radford Arsenal - SWMU 39 | Carrier/Waybill Number: J228 592 8710 | | |
| Contract/Purchase Order/Quote No. | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Analysis: pH | Metals | COD-410 | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RAAP-DW-01 | 9/29/09 | 10:00 | | X | | | X | | | | | | X | | | |
| RAAP-DW-02 | " | 10:05 | | X | | | | | X | | | | | X | | |
| RAAP-DW-03 | " | 10:15 | | X | | | | X | | | | | | | X | |
| RAAP-DW-04 | 9/29/09 | 10:10 | | X | | | | X | | | | | | | X | |

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By: Steve Keitah | 9/29/09 | 1:00 PM | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Appendix C

## Disposal Documentation

# Appendix C-1

# Manifests

Invoice: 40123566 Receipt 02-21 456256 Manifest 006184931JJK

19,860 318

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number [illegible] 2. Page 1 of 3. Emergency Response Phone [illegible] 4. Manifest Tracking Number **006184931 JJK**

5. Generator's Name and Mailing Address [illegible] Generator's Site Address (if different than mailing address) STATE ROUTE [illegible]

Generator's Phone [illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name U.S. EPA ID Number

8. Designated Facility Name and Site Address [illegible] 94 SERVICE DRIVE U.S. EPA ID Number [illegible]

Facility's Phone [illegible]

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. [illegible] | [illegible] | [illegible] | 48,000 | [illegible] | [illegible] |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information [illegible] 24 HOUR EMERGENCY [illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 24 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: [illegible] Date leaving U.S.: 28

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kurt Netemeyer Signature: Kurt Netemeyer Month: 4 Day: 28 Year: 09

Transporter 2 Printed/Typed Name Signature Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Leroy Lehr Signature: [signature] Month: 4 Day: 29 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2605789

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 720
2. Page 1 of
3. Emergency Response Phone: 800 424-9300
4. Manifest Tracking Number: 006184948 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (IRFA)
P O BOX ?
RADFORD VA 24142
Generator's Phone: (540) 882-7651

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5488
U.S. EPA ID Number: MID 000 724 917

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ [illegible] CONTAMINATED SOILS, 9, UN3077, PG III (D008) [illegible] | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1 C098139M.01 SWMU 39- LEAD CONTAMINATED SOILS AND ASH >5MG/L TCLP 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 28 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Dan Abernathy
Signature:
Month: 04 Day: 28 Year: 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month: 04 Day: 29 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2605879

78,800 9165

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VAD 004 320 703 | 2. Page 1 of | 3. Emergency Response Phone: (800) 424-9300 | 4. Manifest Tracking Number: **006184950 JJK**

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (RFC) P.O. BOX 1 RADFORD VA 24141 | Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

Generator's Phone: (540) 639-7261

6. Transporter 1 Company Name: BEELMAN TRUCK CO. | U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: VEOLIA ES TECHNICAL SOLUTIONS, LLC 4500 N I-94 SERVICE DRIVE BELLEVILLE, MI 48111 | U.S. EPA ID Number: MID 980 794 631

Facility's Phone: (800) 592-5489

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZ. WASTE SOLID, NOS (D008 LEAD), 9, | | | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: 000189NCH SYMU 39- LEAD CONTAMINATED SOLID AND DEBRIS FROM LAND IN EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY ALLIANT E.S. VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: H.R. Blankenship | Month: 04 | Day: 28 | Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. | Port of entry/exit: | Transporter signature (for exports only): | Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: NUSLER KALALU 9165/38809 | Signature | Month: 04 | Day: 28 | Year: 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Larry Lehig | Signature | Month: 4 | Day: 29 | Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2605314

1165

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184952 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / P O BOX 1 / RADFORD, VA 24143 / Generator's Phone: (540) 633-7831

Generator's Site Address (if different than mailing address): STATE ROUTE 114 / RADFORD, VA 24141

6. Transporter 1 Company Name: BELLMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI / 49350 N I-94 SERVICE DRIVE / BELLEVILLE, MI 48111 / Facility's Phone: (800) 592-5489 — U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information: C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 04 Day 29 Year 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE ELLIOTT — Signature — Month 04 Day 29 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

16b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Daohaniel Enright — Signature — Month 04 Day 29 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY'S COPY

9167-38811

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006184951 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P O BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 863-7831

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BUELLMAN TRUCK CO. U.S. EPA ID Number: TLR 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | 01 | 49,500 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month 04 Day 29 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S ☐ Export from U.S Port of entry/exit: (SE)
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ivan Chapman
Signature: Ivan Chapman
Month 04 Day 29 Year 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Wadsworth Enright
Signature: Wadsworth Enright
Month 04 Day 29 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY'S COPY**



2606712

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184954 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P.O. BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: IJLR 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL. 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: [signature] Month: 04 Day: 29 Year: 09

INTL
16. International Shipments ☐ Import to U.S ☐ Export from U.S Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802 Signature: [signature] Month: 4 Day: 29 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright Signature: [signature] Month: 04 Day: 29 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2606702

7175

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184953 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7831

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: REELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 57,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098189MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 04 Day: 29 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: ROBERT SAYNE 7175/85
Signature:
Month: 04 Day: 29 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator): Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright
Signature: Nathaniel Enright
Month: 04 Day: 29 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2606691

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**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006184955 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P O BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 639-7631
Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD VA 24141

6. Transporter 1 Company Name: ELLIMAN TRUCK CO. U.S. EPA ID Number: TLE 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: [signature] | Month: 04 Day: 29 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible] | Signature: [signature] | Month: [illegible] Day: [illegible] Year:

Transporter 2 Printed/Typed Name: | Signature: | Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright | Signature: [signature] | Month: 04 Day: 29 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY'S COPY**



2606632

Invoice: 40123566 Receipt 02-21 456309 Manifest 006184958JJK

7170

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| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184958 JJK |

5. Generator's Name and Mailing Address ALLIANT TECHSYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P O BOX 1
RADFORD, VA 24143
STATE ROUTE 114
RADFORD VA 24141
Generator's Phone: (540) 633 7641

6. Transporter 1 Company Name: BELLMAN TRUCK CO. U.S. EPA ID Number: ILR 000 135 236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD-CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 29 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bruce Clover 7170 38800 Signature: Bruce Clover Month: 04 Day: 29 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright Signature: Nathaniel Enright Month: 04 Day: 29 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY'S COPY



2606623

Tr 7164

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184956 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P.O. BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 673-7631

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H.R. Blankenship Month: 04 Day: 29 Year: 09

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leslie Zybach Signature: Month: 04 Day: 29 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Gabriel Enriquez Signature: Month: 04 Day: 29 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2606606

7153

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184957 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P.O BOX 1, RADFORD, VA 24143. Generator's Phone: (540) 893-7631

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111. Facility's Phone: (800) 592-5489. U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information: C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H.R. Blankenship Month: 04 Day: 29 Year: 09

**TRANSPORTER INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: RANDALL STAPLETON Signature: Month: 4 Day: 29 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Washnic/ Enrgh Signature: Month: 04 Day: 29 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

7162

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved, OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184959 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P O BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 639-8831
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BELMAN TRUK CO. — U.S. EPA ID Number: IL R 000 135 236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008 LEAD), PGIII | 001 | DT | 51,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15 GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 04 Day 29 Year 09

INTL
16 International Shipments ☐ Import to U.S ☐ Export from U.S — Port of entry/exit: — Transporter signature (for exports only): — Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Shawn M Mysock — Signature — Month 04 Day 29 Year 09
Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month — Day — Year
19 Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20 Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright — Signature — Month 04 Day 29 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY'S COPY



2606616

Invoice: 40127132 Receipt 02-21 456873 Manifest 006184962JJK

7183 77,320

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 720 | 1 | (800) 424-9300 | 006184962 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P O BOX 1 RADFORD VA 24142
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141
Generator's Phone: (540) 639-7531

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL 49350 N I-94 SERVICE DRIVE BELLEVILLE, MI 4811 U.S. EPA ID Number: MID 980 794 651
Facility's Phone: (800) 592-5489

| 9a. HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S. (D008, LEAD), PG III | 001 | CT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: C098169MDH; SAMPLE 39; LEAD CONTAMINATED SOILS AND ASH; ERG #171; 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E S; VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: [signature] Month: 04 Day: 29 Year: 09

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.: 05 13 09
Transporter signature (for exports only):

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Finley Signature: [signature] Month: 5 Day: 13 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright Signature: [signature] Month: 05 Day: 13 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2634312

Invoice: 40127132 Receipt 02-21 456875 Manifest 006184982JJK

3 | 8

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1 210 020 730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 006184982 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RE4)
P O BOX 1
RADFORD VA 24141
Generator's Phone: (540) 639-7551

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PLANT — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA9077, HAZARDOUS WASTE SOLID, N.O.S. (D008), LEAD, PGIII | 001 | DT | 49,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
D008/SW/D / SWMU 99: LEAD CONTAMINATED SOILS AND ASH / ERG # 171 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH C-21 TF 22

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter. I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 05 Day 13 Year 09

INTL
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kurt Netemeyer — Signature: Kurt Netemeyer — Month 5 Day 13 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month 05 Day 13 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2633812

Invoice: 40127132 Receipt 02-21 456878 Manifest 006184983JJK

680

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184983 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P.O. BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 693-7631
Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE, SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 05 Day 13 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bryan Heck — Signature: By Mark — Month 05 Day 13 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month 05 Day 13 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2634543

Invoice: 40127132 Receipt 02-21 456879 Manifest 006184985JJK

690

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184985 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 893-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: REELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 05 — Day: 13 — Year: 09

**INTERNATIONAL SHIPMENTS**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Matthews — Signature: Richard Matthews — Month: 05 — Day: 13 — Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month: 05 — Day: 13 — Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2634522

Invoice: 40127132 Receipt 02-21 456880 Manifest 006184986JJK

502

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184986 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone (540) 693-7631
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000 135 236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 49,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 38 - LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 03 Day 13 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jeff Combs — Signature — Month 04 Day 13 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright — Signature — Month 05 Day 13 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2634514

Invoice: 40127132 Receipt 02-21 456881 Manifest 006184987JJK

504

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184987 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 673-7831
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK Co. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 49,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
C098189MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW, E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month: 05 Day: 13 Year: 09

TRANSPORTER / INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Gaylon Stephens — Signature: [signature] — Month: 05 Day: 13 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Ernste — Signature: [signature] — Month: 05 Day: 13 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2634485

Invoice: 40127132 Receipt 02-21 456882 Manifest 006184989JJK

027

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184989 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000 135 236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 48,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098189MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH/ ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 05 Day: 13 Year: 09

16. International Shipments ☐ Import to U.S ☐ Export from U.S Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: GARY CONWAY
Signature: Gary Conway
Month: 05 Day: 13 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright
Signature: Nathaniel Enright
Month: 05 Day: 13 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR



2634472

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184988 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 639-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILD 000 135 236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 05 Day: 13 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Trey Koch — Signature: — Month: 5 Day: 13 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month: 05 Day: 13 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2634464

Invoice: 40127132 Receipt 02-21 456884 Manifest 006184990JJK

9167-38811

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006184990 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P O BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000 135 236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1 RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 49,500 | P | D008 |
| | 2 | | | | | |
| | 3 | | | | | |
| | 4 | | | | | |

14. Special Handling Instructions and Additional Information
C09R169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 05 Day 13 Year 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leon Chapman — Signature — Month 05 Day 13 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright — Signature — Month 05 Day 13 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY'S COPY**



2634456

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184991 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) Generator's Site Address (if different than mailing address)

P O BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI U.S. EPA ID Number: MID 000 724 831

49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone (800) 592-5489

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 52000 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 05 Day: 13 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials

| | Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|---|
| Transporter 1 | Locke Zahner | | 05 | 13 | 09 |
| Transporter 2 | | | | | |

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Larry Lehr | | 5 | 14 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2635296

Invoice: 40127132 Receipt 02-21 456900 Manifest 006184994JJK

80,280 9163-38804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184994 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)

P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MIDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month 05 Day 13 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE ELLIOTT — Signature: Wayne Elliott — Month 05 Day 13 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarnacki — Signature: David Tarnacki — Month 5 Day 14 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2635135

Invoice: 40127132 Receipt 02-21 456901 Manifest 006184993JJK

7162-38818 Steven

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184993 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 633-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month Day Year: 05 13 09

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Steven M Wysocki
Signature: Steven M Wysocki
Month Day Year: 05 13 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright
Signature: Nathaniel Enright
Month Day Year: 05 14 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2635077

Invoice: 40127132 Receipt 02-21 456902 Manifest 006184995JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Trk 556-Trl 3803 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184995 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 639-7631
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PI U.S. EPA ID Number: MID 000 724 631
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 49,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C095169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 05 Day: 13 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Dennis Ebers Signature: Dennis Ebers Month: 05 Day: 13 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Greg Lefler Signature: Greg Lefler Month: 5 Day: 14 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2635102

Invoice: 40127132 Receipt 02-21 456903 Manifest 006184996JJK

917 - 3812

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184996 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000 135 236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 49,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 05 Day: 13 Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Nitchee — Signature: [signature] — Month: 5 Day: 13 Year: 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: David Tarnecki — Signature: [signature] — Month: 5 Day: 14 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2635118

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006189031 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFAAP)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|---|
| | X | RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD). PGIII | 001 | DT | 50,000 | P | D008 |
| | | 2. | | | | | |
| | | 3. | | | | | |
| | | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship — Month: 05 Day: 20 Year: 09

**INT'L**

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bruce Clover 7170-38800 — Signature: Bruce Clover — Month: 05 Day: 20 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Larry Lehing — Signature — Month: 5 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2648836

Invoice: 40130794 Receipt 02-21 456877 Manifest 006184984JJK

678

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184984 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7831
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
48350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 48,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
). C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 05 Day: 13 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| JAMES KINNEY 678.38813 | James Kinney | 05 | 13 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Nathanie/Enright | | 05 | 13 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2663017

Invoice: 40127758 Receipt 02-21 456899 Manifest 006184992JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | | | | 006184992 JJK |

GENERATOR

5. Generator's Name and Mailing Address ALLIANT TECHSYSTEMS INC (ATK) P.O. BOX [illegible] [illegible] Generator's Site Address (if different than mailing address) STATE ROUTE 114 [illegible]

Generator's Phone

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name U.S. EPA ID Number

8. Designated Facility Name and Site Address [illegible] U.S. EPA ID Number

Facility's Phone

| 9a HM | 9b U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. [illegible] | | | 51,000 | | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

[illegible] PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMFIT

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature Month 05 Day 13 Year 09

INT'L

16. International Shipments ☐ Import to U.S ☐ Export from U.S Port of entry/exit Date leaving U.S.:
Transporter signature (for exports only).

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Jerry Knapp 7177 | H.R. Blankenship / Jerry Knapp | 5 | 13 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| David Tarnack. | David Tarnack. | 5 | 14 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2637254

Invoice: 40128804 Receipt 02-21 457149 Manifest 004686336JJK

7175 79,860

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 004686336 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: [signature] Month: 05 Day: 19 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [illegible] Signature: [signature] Month: 5 Day: 19 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Judith Reed Signature: [signature] Month: 5 Day: 22 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2647440

Invoice: 40128804 Receipt 02-21 457178 Manifest 004686337JJK

7183

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number: VA1 210 020 730 | 2. Page 1 of: 1 | 3. Emergency Response Phone: (800) 424-9300 | 4. Manifest Tracking Number: 004686337 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) P.O. BOX 1 RADFORD, VA 24143
Generator's Phone: (540) 693-7631
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD, VA 24141

6. Transporter 1 Company Name: BELLMAN TRUCK CO. U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI 49350 N I-94 SERVICE DRIVE BELLEVILLE, MI 48111
U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month 05 Day 19 Year 09 (08)

INTL
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.: 05/20/09

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Finley
Signature:
Month 5 Day 19 Year 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Judith Reed
Signature: Judith Reed
Month 5 Day 20 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2647425

627

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: [illegible]
2. Page 1 of
3. Emergency Response Phone: [illegible]
4. Manifest Tracking Number: 006184969 JJK

5. Generator's Name and Mailing Address: [illegible] Generator's Site Address (if different than mailing address): STATE ROUTE 114 [illegible]

Generator's Phone: [illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: [illegible] U.S. EPA ID Number: [illegible]

Facility's Phone: [illegible]

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. [illegible] LEAD), 8, PGII | [illegible] | DT | 48,000 | P | [illegible] |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

[illegible] 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 05 Day: 11 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.: 5/11/09

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: GARY CONWAY Signature: Gary Conway Month: 05 Day: 11 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright Signature: Nathaniel Enright Month: 05 Day: 11 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2630090

(968)

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved, OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | [illegible] | | (800) 424-9300 | 006184970 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (AEA) — P.O. BOX [illegible], RADFORD VA 24141 — Generator's Phone: (540) [illegible]

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: [illegible] DISPOSAL WASTE TREATMENT P[illegible] — 46350 U.S. 94 SERVICE DRIVE, [illegible] MI 48[illegible] — Facility's Phone: 3[illegible] — U.S. EPA ID Number: MI[illegible]

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ, NON-HAZARDOUS WASTE, SOLID, N.O.S., (BENZOIC ACID) | 20 | DT | 50,000 | P | D[illegible] |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: [illegible] PROVIDED BY SHAW E & I VIA CONTRACT WITH CH2M HILL

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month: 05 — Day: 11 — Year: 09

INTL — 16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit: — Transporter signature (for exports only): — Date leaving U.S.: 5/11/09

TRANSPORTER — 17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible] — Signature: [signature] — Month: 5 — Day: 11 — Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY — 18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| [illegible] | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: [signature] — Month: 05 — Day: 11 — Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2630079

Invoice: 40126670 Receipt 02-21 456762 Manifest 006184968JJK

5.14

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA [illegible]
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: **006184968 JJK**

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (BEA
P O BOX 1
RADFORD VA 24143
Generator's Phone: (540) 639-7881
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (734) 397-6400
U.S. EPA ID Number: MID 981724 951

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (D008), 9, PG III, ERG#171 | TM | DT | 49,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
CROSS CONTAMINATION OF LEAD CONTAMINATED SOILS AND [illegible]
EMERGENCY NUMBER 1-800-424-9300 PROVIDED BY SHAW E [illegible] CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** *I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged* marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 05 Day: 11 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: 82
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Clayton Stephenson
Signature:
Month: 5 Day: 11 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright
Signature:
Month: 05 Day: 11 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2630071

Invoice: 40126670 Receipt 02-21 456763 Manifest 006184967JJK

502

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number
2. Page 1 of
3. Emergency Response Phone
4. Manifest Tracking Number: 006184967 JJK

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC
P.O. BOX 1
RADFORD VA 24141
Generator's Phone:

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN [illegible] WASTE TREATMENT PL
48650 M-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: 313-397-3421
U.S. EPA ID Number

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ UN3077 HAZARDOUS WASTE SOLID, N.O.S. (LEAD) 9 III | [illegible] | [illegible] | 49,000 | P | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
[illegible] DRUMS OF LEAD CONTAMINATED BOILER SLAG [illegible] ERG #171 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I INC CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter: I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 05 Day: 08 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.: 05/11/09

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jeffrey S. Combs
Signature: Jeffrey S. Combs
Month: 05 Day: 11 Year: 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Naohaniel Enright
Signature: Naohaniel Enright
Month: 05 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2630061

3 1 8

Please print or type (Form designed for use on elite (12-pitch) typewriter)

Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 006184974 JJK |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
P.O. BOX 1
RADFORD VA 24141
Generator's Phone (540) 639-7844

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: [illegible] DISPOSAL WASTE TREATMENT F
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI
Facility's Phone (800) 592-5189
U.S. EPA ID Number: MID [illegible]

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. [illegible] | [illegible] | [illegible] | 48,000 | | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
C098169MD; SWMU 20, LEAD [illegible] ... [illegible] ... [illegible] ...

Invoice: 40126670 Receipt 02-21 456765 Manifest 006184971JJK

1 of 80

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| [illegible] | | [illegible] | 006184971 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC. RT 4 [illegible] BEDFORD IN 47421
Generator's Site Address (if different than mailing address): STATE ROUTE 446 BEDFORD IN 47421
Generator's Phone: (540) 382-7886

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL [illegible] 49755 N-84 SERVICE DRIVE BELLEVILLE MI 48111 — U.S. EPA ID Number: MID 005 794 997
Facility's Phone: 313) 482-5488

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1 RQ NA3077 HAZARDOUS WASTE SOLID, N.O.S. (LEAD) PG III | 001 | DF | 50,000 | P | D007 |
| | 2 | | | | | |
| | 3 | | | | | |
| | 4 | | | | | |

14. Special Handling Instructions and Additional Information
C0981600MDI [illegible] IN CASE OF EMERGENCY CONTACT [illegible] 800-424-9300 PROVIDED BY [illegible] UNDER CONTRACT WITH CENTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 05 Day 01 Year 09

16. International Shipments ☐ Import to U.S ☐ Export from U.S — Port of entry/exit: — Date leaving U.S.: 05 11 09 (82)
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bryan Heck — Signature: Bryan Heck — Month 05 Day 11 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| [illegible] | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month 05 Day 11 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2630223

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 478 Form Approved OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST** | 1. Generator ID Number VAT 013 005 730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 006184972 JJK

**GENERATOR**

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC RE 5
P.O. BOX 1
RADFORD, VA 24141
Generator's Phone (540) 639-7811

5. Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. | U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT P
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone (800) 592-5489
U.S. EPA ID Number MID 000 724 997

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ, WASTE HAZARDOUS WASTE SOLID, N.O.S. (LEAD, PB) | 001 | DT | 50,000 | P | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
EMERGENCY CONTACT UNITED ROAD AND ASSIST #1 FOR YOUR EMERGENCY
RELEASE NUMBER (800) 424-9300 WHEN CALLING 3 ALLIANT TECHSYSTEMS

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: H R Blankenship | Month: 05 | Day: 01 | Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: | Date leaving U.S.: 05/11/09 (BK)
Transporter signature (for exports only):

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JAMES KINNEY 678-38813 | Signature: James Kinney | Month: 05 | Day: 11 | Year: 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright | Signature: Nathaniel Enright | Month: 05 | Day: 11 | Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

Invoice: 40126670 Receipt 02-21 456767 Manifest 006184973JJK

690

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: [illegible]
2. Page 1 of
3. Emergency Response Phone: [illegible]
4. Manifest Tracking Number: 006184973 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (REA); P.O. BOX [illegible]; BARBOURSVILLE, WV 25504
Generator's Phone: [illegible]
Generator's Site Address (if different than mailing address): STATE ROUTE 114; PARSONS, WV 26287

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT [illegible]; 49350 N I-94 SERVICE DRIVE; BELLEVILLE, MI 48111
U.S. EPA ID Number: MID [illegible]
Facility's Phone: [illegible]

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ, HAZMAT HAZARDOUS WASTE [illegible], 9, NA3077, PG III (LEAD, PB) | [illegible] | [illegible] | 49,000 | | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
C09816SMDI / SWMU 39- LEAD CONTAMINATED SOILS AND [illegible] HAZARDOUS DEBRIS... [illegible] MANIFEST NUMBER [illegible] WASTE MATERIALS ARE BEING MANAGED UNDER [illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: [signature]
Month: 05 Day: 11 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: [illegible]
Transporter signature (for exports only): Date leaving U.S.: 05 11 09

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Mattingly
Signature: [signature]
Month: 05 Day: 11 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright
Signature: [signature]
Month: 05 Day: 11 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2630204

Invoice: 40126670 Receipt 02-21 456768 Manifest 006184975JJK

9167

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | [illegible] | | [illegible] | 006184975 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC/RFA; P.O. BOX [illegible]; RADFORD VA [illegible]
Generator's Site Address (if different than mailing address): STATE ROUTE 114; RADFORD VA 24141
Generator's Phone: (540) 639-7811

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN [illegible] WASTE TREATMENT
48350 U.S. 24 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (313) 697-5400
U.S. EPA ID Number: MID [illegible]

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZARDOUS WASTE, LIQUID, N.O.S. (D001, D035), 9, UN3082, PG II | [illegible] | [illegible] | 50000 | P | D035 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
[illegible] EMERGENCY PHONE NUMBER (800) 424-9300 PROVIDED BY [illegible] CONTRACTOR CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month 05 Day 01 Year 09

INTL
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.: 05 11 09

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Liam Chapman
Signature: Liam Chapman
Month 05 Day 11 Year 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator): Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. [illegible] 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Emrys
Signature: N Emrys
Month 05 Day 11 Year 09

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2630190

Invoice: 40126670 Receipt 02-21 456769 Manifest 006184976JJK

Tr 2456

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 [illegible] | 2. Page 1 of [illegible] | 3. Emergency Response Phone: (800) 424-9300 | 4. Manifest Tracking Number: 006184976 JJK

5. Generator's Name and Mailing Address: [illegible] P.O. BOX [illegible] RADFORD, VA 24141 | Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

Generator's Phone: [illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO. | U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: | U.S. EPA ID Number:

8. Designated Facility Name and Site Address: [illegible] 4626 N. 94 SERVICE DRIVE [illegible] | U.S. EPA ID Number: [illegible]

Facility's Phone: [illegible]

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. [illegible] LEAD, ES | [illegible] | | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: [illegible] RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANEKNSHIP, TRAFFIC ADMINISTRATOR | Signature: [signature] | Month: 05 | Day: 10 | Year: 09

INT'L

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. | Port of entry/exit: [illegible] | Date leaving U.S.: 05/11/09

Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Leslie [illegible] | Signature: [signature] | Month: 05 | Day: 11 | Year: 09

Transporter 2 Printed/Typed Name: | Signature: | Month: | Day: | Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month: | Day: | Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. [illegible] | 2. | 3. | 4. |
|---|---|---|---|

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright | Signature: [signature] | Month: 05 | Day: 11 | Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2630179

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number: 006184977 JJK

5. Generator's Name and Mailing Address | Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: BEELMAN TRUCK CO. | U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address | U.S. EPA ID Number

49350 I-64 SERVICE DRIVE

Facility's Phone:

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. [illegible] HAZARDOUS WASTE [illegible] | [illegible] | [illegible] | 51,000 | | [illegible] |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

[illegible] RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E S VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature | Month 05 Day 10 Year 09

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: | Date leaving U.S.: 05/11/09

Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry Knapp 7177/3802 | Signature | Month 5 Day 11 Year 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] | Signature | Month 05 Day 12 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2630374

Invoice: 40126670 Receipt 02-21 456789 Manifest 006184979JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) TrK556-Fa.13803 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | | | | 006184979 JJK |

5. Generator's Name and Mailing Address — Generator's Site Address (if different than mailing address)

Generator's Phone

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

Facility's Phone

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. | | | 49,000 | | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter. I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 05 Day 10 Year 09

INTL — 16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.: 05/11/09

Transporter signature (for exports only)

TRANSPORTER — 17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Dennis Ebers — Signature — Month 05 Day 11 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY — 18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year 05/12/09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2630366

Invoice: 40126670 Receipt 02-21 456790 Manifest 006184980JJK

917 -3812 79540

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number: 006184980 JJK

5. Generator's Name and Mailing Address | Generator's Site Address (if different than mailing address)

Generator's Phone

6. Transporter 1 Company Name: BEELMAN TRUCK CO. | U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address | U.S. EPA ID Number

94 SERVICE DRIVE

Facility's Phone

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1 | | | 49,000 | | |
| | 2 | | | | | |
| | 3 | | | | | |
| | 4 | | | | | |

14. Special Handling Instructions and Additional Information

RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature | Month 05 | Day 11 | Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. | Port of entry/exit: | Date leaving U.S.: 05/11/09

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Chris Mitchell | Signature | Month 5 | Day 11 | Year 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Mindi Cougar | Signature | Month 05 | Day 12 | Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2629989

7162-38818 Steven 79220

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number: 006184981 JJK

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC, P.O. BOX [illegible] | Generator's Site Address (if different than mailing address): STATE ROUTE [illegible]

Generator's Phone:

6. Transporter 1 Company Name: BEELMAN TRUCK CO. | U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PLANT, AREA SERVICE DRIVE, BELLEVILLE, MI [illegible] | U.S. EPA ID Number

Facility's Phone:

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. [illegible] | [illegible] | [illegible] | 51,000 | [illegible] | [illegible] |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

[illegible] RESPONSE NUMBER [illegible] PROVIDED BY SHAW [illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: H R Blankenship | Month: 05 | Day: 01 | Year: 09

**INTL**

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. | Port of entry/exit: | Transporter signature (for exports only): | Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven M Wysocki | Signature: Steven M Wysocki | Month: 05 | Day: 11 | Year: 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] | Signature | Month: 05 | Day: 12 | Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2630411

9163

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number: 006184978 JJK

5. Generator's Name and Mailing Address | Generator's Site Address (if different than mailing address)

Generator's Phone

6. Transporter 1 Company Name: BEELMAN TRUCK Co. | U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address | U.S. EPA ID Number

Facility's Phone

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. | | | 50,000 | | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: H R Blankenship | Month: 05 | Day: 11 | Year: 09

INTL 16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.: 05/11/09

Transporter signature (for exports only):

TRANSPORTER 17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE ELLIOTT | Signature: Wayne Elliott | Month: 05 | Day: 11 | Year: 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY 18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Larry Lehay | Signature | Month: 5 | Day: 12 | Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2630383

Invoice: 40128655 Receipt 02-21 457077 Manifest 004686330JJK

9165

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 004686330 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt/Vol | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month 05 Day 18 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: LUCAS KANALIC 9165/338091 Signature: Month 05 Day 18 Year 09
Transporter 2 Printed/Typed Name: Signature: Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: David Tarnacki Signature: David Tarnacki Month 5 Day 18 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2643300

7153

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 004686331 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 05 Day 18 Year 09

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: RANDALL STAPLETON — Signature — Month 5 Day 18 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: David Tarnacki — Signature — Month 5 Day 18 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2643292

Invoice: 40128655 Receipt 02-21 457079 Manifest 004686332JJK

9468

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 004686332 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFAAP)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month Day Year: 05 18 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les Jennings
Signature:
Month Day Year: 05 18 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name:
Signature:
Month Day Year: 05 19 09

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2643162

Invoice: 40128655 Receipt 02-21 457082 Manifest 004686333JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 004686333 JJK

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 683-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 05 Day: 18 Year: 09

**TRANSPORTER INTL**

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bruce Clover 7120 38800
Signature: Bruce Clover
Month: 05 Day: 18 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator): Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Signature: Month: 05 Day: 19 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2643154

Invoice: 40128655 Receipt 02-21 457099 Manifest 004686187JJK

BELLMAN 7151

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2 Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 004686187 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFAAP)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 05 Day 18 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DAN ABERNATHY — Signature — Month 05 Day 18 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Larry Leting — Signature — Month 5 Day 19 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2644593

Invoice: 40129430 Receipt 02-21 457185 Manifest 006189030JJK

9168

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006189030 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 633-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month 05 Day 20 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Les JENNINGS 9168-38812 — Signature: [signature] — Month 05 Day 20 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature: [signature] — Month 05 Day 21 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2650900

Invoice: 40129430 Receipt 02-21 457196 Manifest 006189032JJK

7151

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006189032 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEDMAN TRUCK CO. U.S. EPA ID Number: IRD001135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| | 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No | 10 Containers Type | 11 Total Quantity | 12. Unit Wt./Vol. | 13 Waste Codes |
|---|---|---|---|---|---|---|---|
| GENERATOR | X | RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 52000 | P | D008 |
| | 2 | | | | | | |
| | 3 | | | | | | |
| | 4 | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month 05 Day 20 Year 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: DAN ACCOMETAX
Signature:
Month 05 Day 20 Year 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator): Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Signature: Month Day Year 05 20 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2652441

50,120 9163

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006189034 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vo. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 05 Day: 20 Year: 09

**INTL**

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE ELLIOTT — Signature: Wayne Elliott — Month: 05 Day: 20 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems):

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Judith Reed — Signature: Judith Reed — Month: 5 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2652110

Invoice: 40129430 Receipt 02-21 457204 Manifest 006189033JJK

7177 78,820

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006189033 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFAAP)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month 05 Day 20 Year 09

INT'L
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.
Transporter signature (for exports only):

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802 — Signature: Jerry Knapp — Month 5 Day 20 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Judith Reed — Signature: Judith Reed — Month 5 Day 21 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2652099

Invoice: 40129430 Receipt 02-21 457218 Manifest 006189035JJK

Tr# 9161

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006189035 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFAAP)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BERMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ~~[illegible]~~ ALLIANT TECHSYSTEMS INC
~~BY: H. B. BLANKENSHIP, TRAFFIC ADMINISTRATOR~~
Signature: H. B. Blankenship
Month: 05 Day: 20 Year: 09

INT'L
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leslie Zahner
Signature:
Month: 05 Day: 20 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator): Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a
Printed/Typed Name: David Tarnacki
Signature:
Month: 5 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2651464

Invoice: 40129430 Receipt 02-21 457185 Manifest 006189030JJK

9168

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006189030 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 633-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month 05 Day 20 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Les JENNINGS 9168-38812 — Signature: [signature] — Month 05 Day 20 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature: [signature] — Month 05 Day 21 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2650900

Invoice: 40129430 Receipt 02-21 457196 Manifest 006189032JJK

7151

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006189032 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEDMAN TRUCK CO. U.S. EPA ID Number: IRD001135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| | 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No | 10 Containers Type | 11 Total Quantity | 12. Unit Wt./Vol. | 13 Waste Codes |
|---|---|---|---|---|---|---|---|
| GENERATOR | X | RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 52000 | P | D008 |
| | 2 | | | | | | |
| | 3 | | | | | | |
| | 4 | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month 05 Day 20 Year 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: DAN ACCOMETAX
Signature:
Month 05 Day 20 Year 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator): Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Signature: Month Day Year 05 20 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2652441

50,120 9163

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006189034 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vo. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 05 Day: 20 Year: 09

**INTL**

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE ELLIOTT — Signature: Wayne Elliott — Month: 05 Day: 20 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems):

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Judith Reed — Signature: Judith Reed — Month: 5 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2652110

Invoice: 40129430 Receipt 02-21 457204 Manifest 006189033JJK

7177 78,820

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006189033 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFAAP)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month 05 Day 20 Year 09

INT'L
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.
Transporter signature (for exports only):

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802 — Signature: Jerry Knapp — Month 5 Day 20 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Judith Reed — Signature: Judith Reed — Month 5 Day 21 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2652099

Invoice: 40129430 Receipt 02-21 457218 Manifest 006189035JJK

Tr# 9161

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006189035 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFAAP)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BERMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ~~[illegible]~~ ALLIANT TECHSYSTEMS INC
~~BY: H. B. BLANKENSHIP, TRAFFIC ADMINISTRATOR~~
Signature: H. B. Blankenship
Month: 05 Day: 20 Year: 09

INT'L
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leslie Zahner
Signature:
Month: 05 Day: 20 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator): Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a
Printed/Typed Name: David Tarnacki
Signature:
Month: 5 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2651464

9167

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| [illegible] | [illegible] | 800 424-9300 | 006184963 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC [illegible] P.O. BOX [illegible] BEDFORD, PA 15522

5. Generator's Site Address (if different than mailing address): STATE ROUTE 164 BEDFORD, PA 15522

Generator's Phone: (814) 865-7321

6. Transporter 1 Company Name: BELLMAN TRUCK CO. U.S. EPA ID Number: TLR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT P. 49350 N I-94 SERVICE DRIVE BELLEVILLE, MI 48111 U.S. EPA ID Number: MID 980 794 991

Facility's Phone: (800) 592-5489

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ HAZARDOUS WASTE SOLID, NOS (D008 LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: [illegible] LEAD CONTAMINATED SOILS AND ASH / ERG #171 24 HOUR EMERGENCY RESPONSE NUMBER [illegible] PROVIDED BY SHAW E & I UNDER CONTRACT WITH DSN TRUST

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: [signature] | Month: 05 | Day: 19 | Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: IVAN CHAPMAN | Signature: [signature] | Month: 05 | Day: 19 | Year: 09

Transporter 2 Printed/Typed Name: | Signature: | Month: | Day: | Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Judith Reed | Signature: [signature] | Month: 5 | Day: 19 | Year: 05

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2646178

Invoice: 40128743 Receipt 02-21 457124 Manifest 006184965JJK

9163

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VAD [illegible]
2. Page 1 of: 1
3. Emergency Response Phone: [illegible]
4. Manifest Tracking Number: **006184965 JJK**

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (RFA) P.O. BOX 1 RADFORD VA 24141
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141
Generator's Phone: (540) 639-7811

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT P
49350 N I-94 SERVICE DRIVE BELLEVILLE MI 48111
U.S. EPA ID Number: MID [illegible]
Facility's Phone: (800) 592-5468

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ HAZMAT HAZARDOUS WASTE SOLID, NOS (D008) LEAD PBR | 001 | CF | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
[illegible] CU981689MON / SWMU #9 LEAD CONTAMINATED SOILS AND [illegible] EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROFILE # [illegible] CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 29 Year: 09 (SK) — 05 19 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only)

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE Elliott
Signature: Wayne Elliott
Month: 05 Day: 19 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: David Tarrach
Signature:
Month: 5 Day: 19 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2646148

Invoice: 40128743 Receipt 02-21 457125 Manifest 006184964JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 732 | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number: 006184964 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC/REA
P O BOX
RADFORD VA 24141
Generator's Phone: (540) 891-7804
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. | U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: (313) 397-4477
U.S. EPA ID Number: MID 000 724 331

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. NA1 HAZARDOUS WASTE SOLID N.O.S. (LEAD, PCB) | 20 | DT | 51,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
EMERGENCY CONTACT NUMBER (800) 424-9300 PROVIDED BY SHAW E & I UNDER CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: H.R. Blankenship | Month: 05 Day: 19 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802 | Signature: Jerry Knapp | Month: 5 Day: 19 Year: 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarnach | Signature | Month: 5 Day: 19 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2646127

Invoice: 40128743 Receipt 02-21 457130 Manifest 004686190JJK

7162-38818 Steven

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1 210 020 730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 004686190 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone (540) 693-7631

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name BEELMAN TRUCK CO. U.S. EPA ID Number ILR 000135236

7. Transporter 2 Company Name U.S. EPA ID Number

8. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PI U.S. EPA ID Number MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone (800) 592-5489

| | 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,900 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature Month 05 Day 19 Year 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name Steven M Wyatt Signature Month 05 Day 19 Year 09
Transporter 2 Printed/Typed Name Signature Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year
H111
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name Signature Month 05 Day 19 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. ALLIANT TECHSYSTEMS INC (RFA (800) 424-9300 DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)
P.O. BOX 1



2645917

Invoice: 40128743 Receipt 02-21 457132 Manifest 006184966JJK

Trk # 7164

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | [illegible] | [illegible] | [illegible] | 006184966 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (BFA [illegible] P.O. BOX [illegible] BARRON WI 54812 Generator's Site Address (if different than mailing address) STATE ROUTE 114 BARRON WI 54812

Generator's Phone: [illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT P[illegible] 49350 N I-94 SERVICE DRIVE BELLEVILLE MI 48111 U.S. EPA ID Number [illegible]

Facility's Phone: (800) 592-5489

| 9a. HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZARDOUS WASTE, SOLID, N.O.S. (LEAD), 9, UN3077, PG III LEAD, PGIII | [illegible] | DT | 50,000 | P | [illegible] |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: [illegible] SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG # 171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-[illegible] PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H N Blankenship Month: 05 Day: 19 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Leslie Zahnow Signature: Leslie Zahnow Month: 05 Day: 19 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H111 2. 3.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Signature: Month: Day: Year: 05 21 2009

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2645934

Invoice: 40128743 Receipt 02-21 457139 Manifest 004686334JJK

3 1 8

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1 210 020 730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 004686334 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name BEELMAN TRUCK CO. U.S. EPA ID Number ILR000135236

7. Transporter 2 Company Name U.S. EPA ID Number

8. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PI U.S. EPA ID Number MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| | 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 47,000 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 05 Day: 19 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kurt Nottemeyer Signature: Kurt Nottemeyer Month: 5 Day: 19 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Signature: Month: Day: Year:

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2646055

Invoice: 40128743 Receipt 02-21 457140 Manifest 004686335JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 004686335 JJK

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. #800-35819
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 30,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 05 Day: 19 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: David Myers
Signature: David Myers
Month: 5 Day: 19 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Leon Lehr
Signature:
Month: 5 Day: 20 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2645994

Please print or type (Form designed for use on elite (12-pitch) typewriter)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006184865 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 673-7831

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 38- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 Day: 24 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bruce Clover 7170 38800 — Signature: Bruce Clover — Month: 04 Day: 24 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Wayne Enright — Signature: Wayne J Enright — Month: 04 Day: 24 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2598440

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184864 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P.O. BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 863-7831

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 04 Day 24 Year 09

INTL
16. International Shipments ☐ Import to U.S. ☑ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leslie Pilgrim — Signature — Month 04 Day 24 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Washington Group Int — Signature — Month 04 Day 24 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2598430

6191

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184925 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P O BOX 1
RADFORD, VA 24143
STATE ROUTE 114
RADFORD, VA 24141
Generator's Phone: (540) 899-7631

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,500 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 04 Day 24 Year 09

**TRANSPORTER / INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit:
Transporter signature (for exports only): — Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ray Staff — Signature: Ray Staff — Month 04 Day 24 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month 04 Day 24 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2598424

Invoice: 40122777 Receipt 02-21 456114 Manifest 006184926JJK

7177

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1 210 020 730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 006184926 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 673-7631

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| | 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: [signature] Month: 04 Day: 24 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jerry Knapp 7177/3862 Signature: [signature] Month: 4 Day: 24 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Waherie Knight Signature: [signature] Month: 04 Day: 24 Year: 09

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2598396

Invoice: 40122777 Receipt 02-21 456115 Manifest 006184862JJK

9165

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184862 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P.O. BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 633-7831
Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: TLR 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| | 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 60,000 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098189MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.E. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: [signature] Month: 04 Day: 24 Year: 09

INT'L
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: WILLIAM KANAGA 9165/38509 Signature: [signature] Month: 04 Day: 24 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator): Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright Signature: [signature] Month: 04 Day: 24 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2598299

Invoice: 40122777 Receipt 02-21 456116 Manifest 006184863JJK

7183

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184363 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7831

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000 135 236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 Day: 24 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: ___
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Finley — Signature: — Month: 04 Day: 24 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month: 04 Day: 24 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2598146

# 9163

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184861 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA, P.O. BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 895-2631

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK, CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489 — U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 49,400 | P | D008 | | |
| | 2. | | | | | | | |
| | 3 | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month: 04 Day: 24 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE ELLIOTT — Signature: Wayne Elliott — Month: 04 Day: 24 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month: 04 Day: 24 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2598171

r1 | 75

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184859 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: IL2 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: HR Blankenship — Month 04 Day 24 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: ROBERT Edge 7 77 35863 — Signature — Month 04 Day 24 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright — Signature — Month 04 Day 24 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2598205

3 of 8

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006184876 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA / P.O BOX 1 / RADFORD, VA 24143
Generator's Site Address (if different than mailing address): STATE ROUTE 114 / RADFORD, VA 24141
Generator's Phone: (540) 863-7831

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI / 49350 N I-94 SERVICE DRIVE / BELLEVILLE, MI 48111
U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| 8a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 47,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
). C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** *I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.*
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC / BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 04 Day 24 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: (SE)
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kurt Netemeyer — Signature — Month 4 Day 24 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature — Month 04 Day 24 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2598244

Invoice: 40122777 Receipt 02-21 456125 Manifest 006184927JJK

TIC2-38518 Steven

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006184927 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (RFA) / P.O. BOX 1 / RADFORD, VA 24143
Generator's Site Address (if different than mailing address): STATE ROUTE 114 / RADFORD VA 24141
Generator's Phone: (540) 863-7631

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000 135 236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI / 49350 N I-94 SERVICE DRIVE / BELLEVILLE, MI 48111 — U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15 GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC / BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 Day: 24 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven M Wysocki — Signature: Steven M Wysocki — Month: 04 Day: 24 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Wadrania/ Enright — Signature: Wadrania J Enright — Month: 04 Day: 24 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2598383

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006184928 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 673-7831
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 59000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 10 Day 12 Year 09

**INTL**
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: RANDALL STAPLETON — Signature — Month 4 Day 24 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathanie l Enright — Signature — Month 04 Day 24 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2598349

Invoice: 40122777 Receipt 02-21 456171 Manifest 006184929JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 005 84929 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC TREA / Generator's Site Address (if different than mailing address)
P O BOX 1
RADFORD VA 24143
Generator's Phone: (540) 890-7931
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: KEELHAUL TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL U.S. EPA ID Number: MID 000 724 421
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDU / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1 800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter: I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: [signature] Month: 04 Day: 24 Year: 09

**TRANSPORTER / INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible] Signature: [signature] Month: 4 Day: 20 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarver Signature: [signature] Month: 4 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY'S COPY**



2599929

TCK 7176

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1210 020 780 | | (800) 424-9300 | 006184930 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (RFA... P.O. BOX ... RADFORD VA 24141

Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

Generator's Phone: 540 ...

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: ... DISPOSAL ... 48550 N I-94 SERVICE DRIVE ... Facility's Phone: ... U.S. EPA ID Number:

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1 RQ HAZ... LEAD PO... | ... | ... | 50,000 | P | ... |
| | 2 | | | | | |
| | 3 | | | | | |
| | 4 | | | | | |

14. Special Handling Instructions and Additional Information: ... LEAD CONTAMINATED SOILS AND ASH / ERG #171 ... EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY ... A CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H.R. Blankenship Month: 04 Day: 24 Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bruce Ritchott Signature: Bruce Ritchott Month: 4 Day: 24 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| M... | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarnacki Signature: Month: 4 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2599770

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006213666 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / P.O. BOX 1, RADFORD, VA 24143
Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141
Generator's Phone: (540) 893-7631

6. Transporter 1 Company Name: BEELMAN Truck Co. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111 — U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 1 | DT | 59000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 10 — Day: 20 — Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bruce Fairchild — Signature: Bruce Fairchild — Month: 11 — Day: 20 — Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month: 05 — Day: 20 — Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2588246

9165

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 000 730 | 1 | (800) 424-9300 | 006184911 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA
P O BOX 1
RADFORD VA 24143
Generator's Phone: (540) 639 7831

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL U.S. EPA ID Number: MID 000 724 831
45500 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: (800) 592-5423

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, HAZARDOUS WASTE SOLID, NOS (D008 LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
[illegible] SWMU 39. LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I INC CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: H R Blankenship | Month: 04 | Day: 20 | Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: DOUG KALALL 9165/38909 | Signature | Month: 04 | Day: 20 | Year: 09
Transporter 2 Printed/Typed Name: | Signature | Month | Day | Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: [illegible] | Signature | Month: 04 | Day: 21 | Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



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Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184867 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) P O BOX RADFORD VA 24142
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD, VA 24141
Generator's Phone: (540) 693-7821

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000155236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT [illegible] 49350 N I-94 SERVICE DRIVE BELLEVILLE MI 48111 — U.S. EPA ID Number: MID [illegible]
Facility's Phone: (800) 592-5489

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. [illegible] HAZARDOUS WASTE SOLID [illegible] LDF RQ | [illegible] | DT | 50000 | P | [illegible] |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
098189MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG # [illegible] 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-[illegible] 9300 PROVIDED BY SHAW E S INC CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 Day: 29 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible] Signature: [signature] Month: 4 Day: 30 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| [illegible] | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] Signature: [signature] Month: 04 Day: 30 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2591578

Invoice: 40121898 Receipt 02-21 455944 Manifest 006213669JJK

3 1 5

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1 210 020 730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 006 13669 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) P.O BOX 1, RADFORD, VA 24143
Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141
Generator's Phone: (540) 693-7631

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111 U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt/Vol | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 1 | DT | 47,500 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information: T. C098169MDT / SWMU 39: LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.E. BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: [signature] Month: 04 Day: 20 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kurt Netemeyer Signature: [signature] Month: 4 Day: 20 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: [illegible] Signature: [signature] Month: 04 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2589692

7183

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184866 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

U.S. EPA ID Number: MID 000 724 831

| | 9a HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|---|
| 1 | X | RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50000 | P | D008 |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month: 04 — Day: 29 — Year: 09

**INTL**

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit: — Date leaving U.S.:
Transporter signature (for exports only)

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Finley — Signature: — Month: 4 — Day: 29 — Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Tanya Tanguay — Signature — Month: 04 — Day: 30 — Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2589673

Invoice: 40121898 Receipt 02-21 455946 Manifest 006213667JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006213667 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD VA 24143
Generator's Phone: (540) 882-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5469
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 1 | DT | 5,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature:
Month: 4 Day: 12 Year: 99

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: RANDALL K. STAPLETON
Signature:
Month: 4 Day: 12 Year: 99

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible]
Signature:
Month: 4 Day: 13 Year: 99

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2589680

Invoice: 40121898 Receipt 02-21 455947 Manifest 006184874JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184874 JJK

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEZEMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No. | 10 Containers Type | 11 Total Quantity | 12 Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | OT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 28 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry Knapp 7177/3802
Signature: Jerry Knapp
Month: 4 Day: 28 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Larry Lebo
Signature:
Month: 4 Day: 12 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2589309

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 6171 Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184875 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P.O. BOX 1, RADFORD, VA 24143. Generator's Phone: (540) 693-7631
Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 2414[illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111. Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H.R. Blankenship Month: 04 Day: 28 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: KAY STIFF Signature: Kay Stiff Month: 4 Day: 20 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Larry Lehr Signature: Month: 4 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2589357

7162-38818 Steven

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved, OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | | (800) 424-9300 | 006184873 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH-SYSTEMS INC (REA... P.O. BOX ... RADFORD VA 24141 | Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

Generator's Phone: (540) 639-7231

6. Transporter 1 Company Name: REELMAN TRUCK CO. | U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT P... 49350 N I-94 SERVICE DRIVE BELLEVILLE MI 4811... | U.S. EPA ID Number: MID 980 794 ...

Facility's Phone: 800) 592-6488

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ HAZ... HAZARDOUS WASTE SOLID, NOS (D008 ... & 40% PCP | 1 | DT | 51,000 | P | D038 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: ...SPECIMEN, SHIPPING NAME, 2 ... PLACARDS REQUIRED / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I/A CONTRACT ... CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: H.R. Blankenship | Month: 04 | Day: 20 | Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven M Wysocki | Signature: Steven M Wysocki | Month: 4 | Day: 20 | Year: 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Tony Wolf | Signature | Month: 04 | Day: 21 | Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2589329

Invoice: 40121898 Receipt 02-21 455955 Manifest 006213665JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006213665 JJK

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P O BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 633-7631
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 83?

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 1 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC Signature: H.R. Blankenship Month: 04 Day: 20 Year: 09
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [illegible] Signature: [signature] Month: 4 Day: 20 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Craig Lahey Signature: [signature] Month: 4 Day: 21 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**



2589375

7177

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 700
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: **006184869 JJK**

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (BEA...
P O BOX 1
RADFORD VA 24143
Generator's Phone: (540) 639-7801
Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL...
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
U.S. EPA ID Number: MI 000 724 831
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZARDOUS WASTE SOLID, NOS (D008 LEAD), PG... | 30 | DT | 57,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
D008/I36MDI/SWMU 39- LEAD CONTAMINATED SOILS AND ASHTERS FLY. 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I V 4 CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 15 Year: 09

**INT'L**

16. International Shipments
☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only):
Port of entry/exit:
Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry Knapp 7177
Signature: Jerry Knapp
Month: 4 Day: 15 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Waste Mgmt Engr
Signature:
Month: 04 Day: 15 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 1 of 1 Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 000 730 | 1 | (800) 424-9300 | 006184868 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC/RFA, P.O. BOX 1, RADFORD VA 24142
Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD VA 24141
Generator's Phone: (540) 639-7691

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111 — U.S. EPA ID Number: MID 000 724 921
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, 9, M077, WASTE SOLID, NOS (D008, LEAD), PG III | 001 | DT | 51,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
0098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH, ERG #171, 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY CHEMTREC VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 04 Day 15 Year 09

**INT'L**
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: RAY SNEE — Signature: R Snee — Month 4 Day 15 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Wahaniel Enright — Signature: Mark J Enright — Month 04 Day 15 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

7183

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 797
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: **006184871 JJK**

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 639-7004

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT P.
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ HAZ. WASTE SOLID, N.O.S. (LEAD) PG III | 001 | DT | 50000 | | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY COMPANY'S EPA CONTRACT WITH CHEMTREC

15 **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 15 Year: 09

**INTL**
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Finley
Signature: RD Fin
Month: 4 Day: 15 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Wadhaniel Kargbo
Signature:
Month: 04 Day: 15 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

9165

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 022 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: **006184870 JJK**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC/RFA
P O BOX 1
RADFORD VA 24142
Generator's Phone: (540) 639-7821

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number:

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008 LEAD), PG III | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
CONTAINS ONLY SWMU 39- LEAD CONTAMINATED SOILS AND ASH. USE #1 24-HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY ALLIANT TECHSYSTEMS INC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature:
Month Day Year: 04-15-09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: ROBERT KRALIC 9165/38809
Signature:
Month Day Year: 04 15 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Knight
Signature:
Month Day Year: 04 15 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

9167

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184912 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5469
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 49,500 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 Day: 22 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ivan Chapman — Signature: Ivan Chapman — Month: 04 Day: 22 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Kathaniel Enright — Signature: Kathaniel J Enright — Month: 04 Day: 22 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2592793

Invoice: 40122087 Receipt 02-21 456021 Manifest 006184913JJK

#9163

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184913 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (REA) Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 49,000 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 22 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: WAYNE ELLIOTT Signature: Wayne Elliott Month: 04 Day: 22 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright Signature: Nathaniel Enright Month: Day: Year:

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2592781

Trf# 7164

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184914 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)

P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831

49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month 04 Day 22 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Leslie Zahnen — Signature: Leslie Zahnen — Month 04 Day 22 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Evrytt — Signature: Nathaniel Evrytt — Month 04 Day 22 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2592749

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184915 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (REPA) P.O. BOX 1, RADFORD, VA 24143
Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141
Generator's Phone: (540) 693-7631

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236
7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111 U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 22 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bruce Clover 7120 38800 Signature: Bruce Clover Month: 04 Day: 22 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Maxine Enright Signature: Maxine Enright Month: 04 Day: 22 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2592743

TCK 7776

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184917 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 59000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC
BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 22 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bruce Puckett
Signature: Bruce Puckett
Month: 4 Day: 22 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Washington Enright
Signature:
Month: 04 Day: 22 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2592761

Invoice: 40122087 Receipt 02-21 456026 Manifest 006184916JJK

7168

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184916 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFP... Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 639-7631
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILE 000 135 236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| | 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDT / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 22 Year: 09

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les JENNINGS 9168-38812 Signature: Month: 04 Day: 22 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright Signature: Nathaniel Enright Month: 04 Day: 22 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2592755

9165

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184918 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: HR.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: [signature] — Month: 04 Day: 22 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DUSTY KAMALL 9165/38809 — Signature: [signature] — Month: 04 Day: 22 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: [signature] — Month: 04 Day: 22 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2592767

7183

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184919 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: [signature] — Month 04 Day 22 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Finley — Signature: [signature] — Month 4 Day 22 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright — Signature: [signature] — Month 04 Day 22 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2592787

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184920 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P.O. BOX 1, RADFORD, VA 24143
Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141
Generator's Phone: (540) 693-7631

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111 U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 22 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: ROBERT JAYNE 7127 8503 Signature: Month: 04 Day: 22 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Kenyon Signature: Nathaniel J Smith Month: 04 Day: 22 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2592803

318

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184923 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| | 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 47,500 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
I. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 Day: 22 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Kurt Natemeyer | Kurt Natemeyer | 4 | 22 | 09 |
| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
| | | | | |

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Nathaniel Engle | | 04 | 22 | 09 |

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2592809

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 6191 Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | | (800) 424-9300 | 006184922 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (VEPA), P.O. BOX 1, RADFORD VA 24141 — Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD VA 24141

Generator's Phone: (540) 639-7821

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL, 49350 N I-94 SERVICE DRIVE, BELLEVILLE MI 48111 — U.S. EPA ID Number: MID 991 291 691

Facility's Phone: (800) 592-5489

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S. (CONTAINS LEAD), PGIII | 001 | DM | 59,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: DOT PROPER SHIPPING NAME: RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S. (CONTAINS LEAD), PGIII. EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHIPPER. VA SUBCONTRACTOR WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H.R. Blankenship — Month 04 Day 22 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: KAM SHEFF — Signature: — Month 4 Day 22 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. H141 | 2. | 3. | 4. |
|---|---|---|---|

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarnek — Signature: — Month 4 Day 23 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2593988

7153

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 480
2. Page 1 of
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184857 JJK

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH-SYSTEMS INC (RFS). P.O. BOX [illegible] RADFORD VA 24141
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141
Generator's Phone: (540) 639-7891

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MODERN DISPOSAL WASTE TREATMENT PL 49350 N-S4 SERVICE DRIVE BELLEVILLE MI 48111
U.S. EPA ID Number: MID 000 724 89[illegible]
Facility's Phone: (800) 592-0469

| 9a HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UNIT, HAZARDOUS WASTE SOLID, NOS, (D008 LEAD), PG | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. D008 (CONTAMINATED WITH LEAD) CONTAMINATED DUE TO FIRE ON SITE. ERG #171. 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 22 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: RANDALL STAPLETON
Signature:
Month: 4 Day: 22 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H11 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: David Tarnak
Signature:
Month: 4 Day: 23 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2593983

Invoice: 40122087 Receipt 02-21 456047 Manifest 006184924JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VAD 013 208 730
2. Page 1 of
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: **006184924 JJK**

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (REA)
P O BOX 1
RADFORD VA 24141
Generator's Phone: (540) 639-8707
Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 980 724 557

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZARDOUS WASTE SOLID, N.O.S. (D008, LEAD) | 001 | DT | 51,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
CONTAINS CONTAMINATED SOILS AND ASH FROM #171 DAYTON ENVIRONMENTAL
EMERGENCY NUMBER (800) 424-9300 PROVIDED BY S-A-M-E & EMA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 22 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3502
Signature: Jerry Knapp
Month: 4 Day: 22 Year: 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: [illegible]
Signature
Month Day Year: 04 27 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2593976

Invoice: 40122087 Receipt 02-21 456048 Manifest 006184921JJK

7162-38818 Steven

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1 210 022 730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 006184921 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RMA) P O BOX 1 RADFORD VA 24140

Generator's Site Address (if different than mailing address) STATE ROUTE 114 RADFORD VA 24141

Generator's Phone (540) 639-7691

6. Transporter 1 Company Name BEELMAN TRUCK CO — U.S. EPA ID Number ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PL 49350 N I-94 SERVICE DRIVE BELLEVILLE, MI 48111 — U.S. EPA ID Number MID 980 991 281

Facility's Phone (800) 592-5489

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S. (LEAD, D008) | 001 | DT | 51,900 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
D008/SWMU 89- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800 424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 04 Day 22 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven M Wysocki — Signature — Month 4 Day 22 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H141 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month 04 Day 23 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2593968

Invoice: 40122087 Receipt 02-21 456049 Manifest 006184858JJK

7151

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA 210 020 730 | 1 | (800) 424-9300 | 006184858 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RTS) P O BOX 1 RADFORD VA 24141 — Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

Generator's Phone: (540) 639-7831

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT P — U.S. EPA ID Number: MID 980 724 681

49350 I-94 SERVICE DRIVE BELLEVILLE MI 48111

Facility's Phone: 800) 592-0439

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ NA3077 HAZARDOUS WASTE SOLID, N.O.S. (CONTAINS LEAD) PGIII | 001 | DT | 55000 | P | D009 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: D009/169MD1 SWMU 39- LEAD CONTAMINATED SOILS AND ASH; ERG #171; 24 HOUR EMERGENCY RESPONSE NUMBER, 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 04 Day 22 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

**TRANSPORTER INTL**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Dan Abernathy — Signature — Month 04 Day 22 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Tonya Tough — Signature — Month 04 Day 29 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2593944

Invoice: 40121242 Receipt 02-21 455811 Manifest 006213660JJK

79,660 7183

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: [illegible]
2. Page 1 of: 1
3. Emergency Response Phone: [illegible]
4. Manifest Tracking Number: 006213660 JJK

5. Generator's Name and Mailing Address: [illegible] P.O. BOX [illegible] RADFORD [illegible]
Generator's Site Address (if different than mailing address): STATE ROUTE [illegible] RADFORD [illegible]
Generator's Phone: [illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MOTOR DISPOSAL WASTE TREATMENT SI [illegible] 49350 I-94 SERVICE DRIVE [illegible]
U.S. EPA ID Number: [illegible]
Facility's Phone: [illegible]

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S. (D001) LEAD, PG | 1 | | 50,000 | P | D01 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: [illegible] RESPONSE NUMBER: 800-424-9300 PROVIDED BY SAME AS [illegible]

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 04 Day: 16 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: [illegible]
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Finley
Signature: [signature]
Month: 8 Day: 16 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator): U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator): Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Tonya Cowan
Signature: [signature]
Month: 04 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2583175

Invoice: 40121242 Receipt 02-21 455812 Manifest 006184851JJK

#9163

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: [illegible]
2. Page 1 of: 1
3. Emergency Response Phone: 800 424-9300
4. Manifest Tracking Number: **006184851 JJK**

5. Generator's Name and Mailing Address: [illegible] ALLIANT TECHSYSTEMS INC
P.O. BOX [illegible]
[illegible]
Generator's Phone: [illegible]

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
[illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: [illegible] MICHIGAN DISPOSAL WASTE TREATMENT PLA
[illegible] SERVICE DRIVE
[illegible]
Facility's Phone: [illegible] 582-5488
U.S. EPA ID Number: MID 000 724 81[illegible]

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt/Vol | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ HAZARDOUS WASTE [illegible] (LEAD, PC.) | 001 | DT | 49,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
[illegible] HAVING BE[illegible] HAZARDOUS AND ACCEPTED AT [illegible] IN CASE OF EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I INC CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 04 Day: 16 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE ELLIOTT
Signature: Wayne Elliott
Month: 04 Day: 16 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| [illegible] | | ✓ | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Tonya Cougar
Signature:
Month: 04 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2582823

Invoice: 40121242 Receipt 02-21 455814 Manifest 006184852JJK

9167-3881

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA 3 19 020 720
2. Page 1 of
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184852 JJK

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC [illegible] Generator's Site Address (if different than mailing address)
P.O. BOX 1
RADFORD VA 24141
STATE ROUTE 114
RADFORD VA 24141
Generator's Phone: (540) 639-7701

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL U.S. EPA ID Number: MID 000 724 [illegible]
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: (800) 592-5468

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No. | 10 Containers Type | 11 Total Quantity | 12 Unit Wt./Vol. | 13 Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ UN3077 HAZARDOUS WASTE SOLID N.O.S. CLASS 9 (LEAD), PG III | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. 0098180MD / SWMU 39- LEAD CONTAMINATED SOILS AND ASH. ERG #171. 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY CHEMTREC VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 04 Day: 16 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ivan Chapman
Signature: Ivan Chapman
Month: 04 Day: 16 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarnecki
Signature: David Tarnecki
Month: 4 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2582838

Invoice: 40123152 Receipt 02-21 456183 Manifest 006184933JJK

9165

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VAD 077 220 730 | 2. Page 1 of 1 | 3. Emergency Response Phone: (800) 424-9300 | 4. Manifest Tracking Number: **006184933 JJK**

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (RFP) C/O FOOT RADFORD VA 24141 | Generator's Site Address (if different than mailing address): STATE ROUTE 114 DUBLIN VA

Generator's Phone: (540) 639-8000

6. Transporter 1 Company Name: BEELMAN TRUCK CO. | U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL 49350 N I-94 SERVICE DRIVE BELLEVILLE MI 48111 | U.S. EPA ID Number: MID 053 724 611

Facility's Phone: (800) 592-5489

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZCOM HAZARDOUS WASTE SOLID, NOS (D007 LEAD), PG I | 001 | CM | 50,000 | P | D007 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: EMERGENCY SWMU 59 LEAD CONTAMINATED TOOLS AND ASH FOR DISPOSAL 24 HOUR EMERGENCY RESPONSE NUMBER (800) 424-9300 PROJECT SUPERVISOR CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: H R Blankenship | Month: 04 | Day: 27 | Year: 09

**INTERNATIONAL SHIPMENTS**

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. | Port of entry/exit: | Transporter signature (for exports only): | Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DUSTY KALALL 9165/78809 | Signature | Month: 04 | Day: 27 | Year: 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright | Signature | Month: 04 | Day: 27 | Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2600845

3 of 8

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number: VA1 210 020 730 | 2. Page 1 of 1 | 3. Emergency Response Phone: (800) 424-9300 | 4. Manifest Tracking Number: 006184932 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P.O BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 893-7631

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| | 9a HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 47,500 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H B BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H B Blankenship — Month: 04 Day: 27 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kurt Netemeyer — Signature — Month: 4 Day: 27 Year: 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enyeho — Signature — Month: 04 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2601391

Invoice: 40123152 Receipt 02-21 456186 Manifest 006184935JJK

9/67 38811

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1. | (800) 424-9300 | 006184935 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) / Generator's Site Address (if different than mailing address)

P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 673-7831

STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PT — U.S. EPA ID Number: MID 000 724 831

49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| 8a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI7 SWMU 38- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.D. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: HR Blankenship — Month 04 Day 27 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ivan Chapman — Signature: Ivan Chapman — Month 04 Day 27 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a

Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month 04 Day 27 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2601297

Invoice: 40123152 Receipt 02-21 456187 Manifest 006184934JJK

9163

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: [illegible]
2. Page 1 of: 1
3. Emergency Response Phone: [illegible]
4. Manifest Tracking Number: **006184934 JJK**

5. Generator's Name and Mailing Address: [illegible] P.O. BOX [illegible] BAFFORD VA 24148
Generator's Site Address (if different than mailing address): STATE ROUTE 114 BAFFORD VA 2414[illegible]
Generator's Phone: [illegible]

6. Transporter 1 Company Name: BELLMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (734) 397-5400
U.S. EPA ID Number: MID 980 704 901

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. NA1, NON-RCRA HAZARDOUS WASTE SOLID, N.O.S. (D008, LEAD) PGIII | 001 | DT | 50,000 | | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: CONTAINS LESS THAN 5% LEAD CONTAINING LCD WOOD AND ASH. FOR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY CHEMTREC CONTRACT NUMBER [illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: HR.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: [signature]
Month: 04 Day: 27 Year: 09

**INTL**
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

**TRANSPORTER**
17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE ELLIOTT
Signature: [signature]
Month: 04 Day: 27 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**
18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator):
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator):
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathanie[illegible] Knight
Signature: [signature]
Month: 04 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2600863

Invoice: 40123152 Receipt 02-21 456188 Manifest 006184940JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184940 JJK

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (RFA)
P O BOX 1
RADFORD VA 24142
Generator's Phone: (540) 882-7884
Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 381

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, UN3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD, PGIII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
WORKMMD - SWMU 39- LEAD CONTAMINATED SOILS PLEASE CALL IN YOUR EMERGENCY RESPONSE NUMBER - 800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter. I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 27 Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible]
Signature:
Month: 04 Day: 27 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H141 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright
Signature:
Month: 04 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2600880

Invoice: 40123152 Receipt 02-21 456189 Manifest 006184941JJK

6191

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number [illegible] 2. Page 1 of 1 3. Emergency Response Phone (800) 424-9300 4. Manifest Tracking Number **006184941 JJK**

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) P O BOX 1 RADFORD VA 24141 Generator's Site Address (if different than mailing address) STATE ROUTE 114 RADFORD VA 24141

Generator's Phone: (540) 639-7[illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL 49350 N I-94 SERVICE DRIVE BELLEVILLE MI 48111 U.S. EPA ID Number: MID 000 724 [illegible]

Facility's Phone: (800) 592-3466

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ, NON-[illegible] HAZARDOUS WASTE, SOLID, N.O.S. (LEAD FOIL) | 001 | DT | 51,500 | P | D300 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: DOT EMERGENCY RESPONSE GUIDE 138; LEAD CONTAMINATED SOILS AND PPE. ERG #171. 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 27 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: RAY STAFF Signature: R Staff Month: 4 Day: 27 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a

Printed/Typed Name: Nathaniel Enright Signature: Nathaniel Enright Month: 04 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2600892

Invoice: 40123152 Receipt 02-21 456190 Manifest 006184942JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184942 JJK

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD VA 24142
Generator's Phone: (540) 639-7231
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZ WASTE, HAZARDOUS WASTE SOLID, NOS (D008, LEAD, PGIII) | 001 | DT | 51,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
CONSIGNMENT SWMU 39 CERCLA NONHAZARDOUS AND ASH. ERG #171 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 04 Day: 27 Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JERRY KNAPP 7177/3802
Signature: Jerry Knapp
Month: 4 Day: 27 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nadrene J Enright
Signature: Nadrene J Enright
Month: 04 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2600914

Invoice: 40123152 Receipt 02-21 456192 Manifest 006184943JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184943 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 633-7831

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H. R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 27 Year: 09

16. International Shipments ☐ Import to U.S ☐ Export from U.S Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Leslie Bahnen
Signature:
Month: 04 Day: 27 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright
Signature:
Month: 04 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2601173

Invoice: 40123152 Receipt 02-21 456193 Manifest 006184945JJK

7162

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184945 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 893-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,800 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 Day: 27 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Steven M Wysocki — Signature: Steven M Wysocki — Month: 04 Day: 27 Year: 09
Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month: 04 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2601185

Invoice: 40123152 Receipt 02-21 456194 Manifest 006184944JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184944 JJK |

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone (540) 693-7631

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI — U.S. EPA ID Number: MID 000 724 831
48350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1 RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 51,000 | P | D008 | | |
| | | 2 | | | | | | | |
| | | 3 | | | | | | | |
| | | 4 | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 Day: 27 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bruce Clover — Signature: Bruce Clover — Month: 04 Day: 27 Year: 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month: 04 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2601194

7183

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006184947 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/ P O. BOX 1, RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489 — U.S. EPA ID Number: MID 000 724 831

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No | 10 Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15 GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 04 Day 27 Year 09

INTL
16 International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: ____
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Finley — Signature: R D Finley — Month 4 Day 27 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Waotreniel Enriche — Signature: [signature] — Month 04 Day 27 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2601210

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184946 JJK

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: REELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 27 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: RANDALL STAPLETON
Signature:
Month: 4 Day: 27 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Enright
Signature:
Month: 04 Day: 27 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)



2601243

Invoice: 40121313 Receipt 02-21 455842 Manifest 006213655JJK

6191

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1 Generator ID Number | 2. Page 1 of | 3 Emergency Response Phone | 4 Manifest Tracking Number 006213655 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address / Generator's Site Address (if different than mailing address)

Generator's Phone

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

[illegible] SERVICE DRIVE

Facility's Phone

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. [illegible] | 1 | | 51,000 | | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

[illegible]

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 04 Day 17 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.
Transporter signature (for exports only)

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: RAY STAFF — Signature — Month 4 Day 17 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarnacki — Signature — Month 4 Day 17 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2583994

Invoice: 40121313 Receipt 02-21 455845 Manifest 006213656JJK

Please print or type. Form designed for use on elite (12-pitch) typewriter.

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number
2. Page 1 of 1
3. Emergency Response Phone (800) 424-9300
4. Manifest Tracking Number: 006213656 JJK

**GENERATOR**

5. Generator's Name and Mailing Address
P.O. BOX [illegible]
RADFORD VA 24141
Generator's Phone [illegible]

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
[illegible]
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone [illegible]
U.S. EPA ID Number [illegible]

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. [illegible] HAZARDOUS WASTE SOLID, N.O.S. (D008) [illegible] | 1 | DT | 51,000 | P | [illegible] |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
[illegible] CONTAMINATED SOIL MANIFEST #[illegible] 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY [illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month 04 Day 17 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit
Transporter signature (for exports only): Date leaving U.S.

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802
Signature: Jerry Knapp
Month 4 Day 17 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tavrachi
Signature: David Tavrachi
Month 4 Day 17 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2583984

7162

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 720
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: **006213658 JJK**

5. Generator's Name and Mailing Address: P O BOX 1 RADFORD VA 24142
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141
Generator's Phone: 540 639 7201

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PLANT
48350 W 12 MILE RD NOVI MI 48377
U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ, NA 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (LEAD), PG III | 1 | DT | 51,800 | P | D009 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: CONTAINS LEAD CONTAMINATED SOIL AND DEBRIS FROM OUR EMERGENCY RESPONSE UNIT RESPONDING TO A SPILL ON 4/16/09 AT 1700 HRS. EMERGENCY CONTACT: H.R. BLANKENSHIP (540) 639-7201

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 17 Year: 09

**INT'L**

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven M Wyatt
Signature: Steven M Wyatt
Month: 04 Day: 17 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarnacki
Signature: David Tarnacki
Month: 4 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2583978

Invoice: 40121313 Receipt 02-21 455847 Manifest 006213657JJK

7175

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number [illegible] 2. Page 1 of [illegible] 3. Emergency Response Phone [illegible] 4. Manifest Tracking Number **006213657 JJK**

5. Generator's Name and Mailing Address [illegible] Generator's Site Address (if different than mailing address)
[illegible] STATE ROUTE 114
[illegible]
Generator's Phone: [illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address [illegible] U.S. EPA ID Number [illegible]
[illegible]
Facility's Phone: [illegible]

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. [illegible] | 1 | [illegible] | 50,000 | | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
[illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 17 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: ROBERT [illegible] 7175 3FF03 Signature: [signature] Month: 4 Day: 17 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: David Tarnacki Signature: [signature] Month: 4 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2583972

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VAT 210 001 732 | 1 | (800) 424-9300 | 006184872 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (ATK) P O BOX [illegible] BADFORD VA 24141

Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

Generator's Phone: [illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: [illegible] HAZARDOUS WASTE TREATMENT PL 49350 N I-94 SERVICE DRIVE [illegible] MI [illegible] — U.S. EPA ID Number: [illegible]

Facility's Phone: 586 949-6488

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. [illegible] WASTE SOLID NOS D008 LEAD PB | 001 | DT | 51,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: [illegible] CONTAINERS AND ANY SPILLED MATERIALS #1171 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 — Day: 15 — Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: ___ Date leaving U.S.: ___

Transporter signature (for exports only):

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Robert Sayre 388B — Signature — Month: 4 — Day: 15 — Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature — Month: 04 — Day: 16 — Year: 09

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2585406

Invoice: 40121387 Receipt 02-21 455777 Manifest 006184855JJK

7162-38818 Steven

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 733
2. Page 1 of
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184855 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (EPA / Generator's Site Address (if different than mailing address)
P O BOX 1
RADFORD VA 24141
Generator's Phone: (540) 639-7884
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: (800) 592-8469
U.S. EPA ID Number: MID 000 724 331

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ, NON-RCRA REGULATED WASTE SOLID, NOS, (D008 LEAD), PG* | 001 | CT | 51,900 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
D008 HSM01 / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY B+A, E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 15 Year: 09

INTL
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only):
Port of entry/exit:
Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Steven M Wysocki
Signature: Steven M Wysocki
Month: 04 Day: 15 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111
2.
3.
4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: David Tarnack
Signature: David Tarnack
Month: 4 Day: 16 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2585393

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 736 | 1 | (800) 424-9300 | 006184848 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (BEA) — P O BOX 1 — RADFORD VA 24141
Generator's Site Address (if different than mailing address): STATE ROUTE 114 — RADFORD VA 24141
Generator's Phone: (540) 639-7881

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000 135 236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL — 49350 N I-94 SERVICE DRIVE — BELLEVILLE MI 48111 — U.S. EPA ID Number: MID 053 724 351
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PSN | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
ERG#169/MERCURY MU 39 LEAD CONTAINING [illegible] AND APPENDIX #171 / 24 HOUR EMERGENCY RESPONSE NUMBER (800)424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 — Day: 16 — Year: 09

INTL
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit: — Date leaving U.S.
Transporter signature (for exports only):

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leslie Zahn — Signature — Month: 04 — Day: 16 — Year: 09
Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone
18c. Signature of Alternate Facility (or Generator) — Month — Day — Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 — 2. — 3. — 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Tonya Cougar — Signature — Month: 04 — Day: 17 — Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2585468

Invoice: 40121387 Receipt 02-21 455815 Manifest 006184853JJK

7170

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VAR 310 020 736
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184853 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) P O BOX [illegible] RADFORD VA 24143
Generator's Phone: [illegible]
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL 49350 N I-94 SERVICE DRIVE [illegible]
U.S. EPA ID Number: MID 000 724 821
Facility's Phone: (330) 532-3468

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No. | 10 Containers Type | 11 Total Quantity | 12 Unit Wt./Vol. | 13 Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ, UN3077, HAZARDOUS WASTE SOLID, NOS (D008 LEAD), 9, PG III | 001 | CY | 51,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: RCRA/CWA/TSCA WASTE LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHANN & [illegible] UNDER CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 16 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bruce Clover 7170 38800
Signature: Bruce Clover
Month: 04 Day: 16 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Tonya Chaffin
Signature:
Month: 04 Day: 16 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2585505

2153

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006184854 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD VA 24141
Generator's Phone: (540) 639-7401

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: (800) 592-7482
U.S. EPA ID Number: MID 000 724 801

| 9a HM | 9b U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No. | 10 Containers Type | 11 Total Quantity | 12 Unit Wt./Vol. | 13 Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ HAZARDOUS WASTE SOLID, N.O.S. (LEAD), 9, NA3077, PG III | 001 | CM | 51,500 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. D008/RCRA/MI SWMU 28-LEAD CONTAMINATED DUST AND ASH - ERG #171 - 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month: 04 Day: 16 Year: 09

INTL
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: RANDALL K. STAPLETON
Signature: Randall K. Stapleton
Month: 4 Day: 16 Year: 09
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Tonya Wright
Signature:
Month: 04 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2585483

9165

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1 Generator ID Number | 2. Page 1 of | 3 Emergency Response Phone | 4 Manifest Tracking Number |
|---|---|---|---|
| VA1 210 022 [illegible] | | [illegible] | 006213659 JJK |

**GENERATOR**

5 Generator's Name and Mailing Address: ALLIANT TECHSYSTEMS INC (AFT) P O BOX [illegible] RADFORD VA 24141

Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD [illegible]

Generator's Phone: [illegible]

6 Transporter 1 Company Name: BEELMAN TRUCK CO.

U.S. EPA ID Number: ILR000135236

7 Transporter 2 Company Name:

U.S. EPA ID Number:

8 Designated Facility Name and Site Address: [illegible] DISPOSAL MANAGEMENT SYSTEM 49850 I-94 SERVICE DRIVE [illegible]

U.S. EPA ID Number: MID 980 794 957

Facility's Phone: 800 592-6464

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No. | 10 Containers Type | 11 Total Quantity | 12 Unit Wt./Vol. | 13 Waste Codes |
|---|---|---|---|---|---|---|
| | 1 [illegible] | 1 | [illegible] | 50,000 | | |
| | 2 | | | | | |
| | 3 | | | | | |
| | 4 | | | | | |

14 Special Handling Instructions and Additional Information: [illegible] STATE ID# LEAD CONTAMINATED SOIL AND ERG # [illegible] EMERGENCY TELEPHONE NUMBER 1 800-424-9300 PROVIDED BY SHIPPER [illegible] CONTAINS CHEMTREC

15 GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR

Signature: H R Blankenship

Month: 04 Day: 16 Year: 09

**INT'L**

16 International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of Entry/Exit:

Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17 Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DUSTY KARALIS 9165/78509

Signature:

Month: 04 Day: 16 Year: 09

Transporter 2 Printed/Typed Name:

Signature:

Month: Day: Year:

**DESIGNATED FACILITY**

18 Discrepancy

18a Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b Alternate Facility (or Generator)

U.S. EPA ID Number:

Facility's Phone:

18c Signature of Alternate Facility (or Generator)

Month: Day: Year:

19 Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2 | 3. | 4 |
|---|---|---|---|
| [illegible] | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Larry Lebioy

Signature:

Month: 04 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2585546

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 [illegible] 020 730 | 1 | (800) 424-9300 | 006184856 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (REA
P O BOX [illegible]
[illegible]
Generator's Phone: [illegible]

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
[illegible]

6. Transporter 1 Company Name: REELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
[illegible] 24 SERVICE DRIVE
[illegible]
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID [illegible]

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No. | 10 Containers Type | 11 Total Quantity | 12 Unit Wt./Vol. | 13 Waste Codes |
|---|---|---|---|---|---|---|
| | 1. [illegible] HAZARDOUS WASTE SOLID [illegible] LEAD, PB | [illegible] | [illegible] | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1 C09S69MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH. ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER [illegible]-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 16 Year: 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bruce Pritchett
Signature: Bruce Pritchett
Month: 4 Day: 16 Year: 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Larry Lehity
Signature:
Month: 4 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2585513

Invoice: 40121387 Receipt 02-21 455819 Manifest 006184846JJK

9168 81,160 9168

Please print or type. (Form designed for use on elite (12-pica) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA 210 020 730 | 2. Page 1 of: 1 | 3. Emergency Response Phone: (800) 424-9300 | 4. Manifest Tracking Number: 006184846 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFP) P O BOX 1 RADFORD VA 24143 | Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141

Generator's Phone: (540) 639-7811

6. Transporter 1 Company Name: BEELMAN TRUCK CO. | U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL 49350 N I-94 SERVICE DRIVE BELLEVILLE MI 48111 | U.S. EPA ID Number: MID 000724 821

Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ HAZMAT HAZARDOUS WASTE SOLID, NOS (D008 LEAD), 9G | 20 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: C098169MDI / SWMD 38. LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E S [illegible] CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR | Signature: H.R. Blankenship | Month: 04 | Day: 16 | Year: 09

INTL

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. | Port of entry/exit: _____ | Date leaving U.S.: _____

Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: LEE JENNINGS 9168-38812 | Signature | Month: 04 | Day: 16 | Year: 09

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Larry Lehing | Signature | Month: 4 | Day: 17 | Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2585528

Invoice: 40121387 Receipt 02-21 455821 Manifest 006184847JJK

16,040 318

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 732 | 1 | (800) 424-9300 | 006184847 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RIA)
P O BOX 1
RADFORD VA 24143
Generator's Phone: 540) 639-7321

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT P
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
U.S. EPA ID Number: MID 000 724 89
Facility's Phone: (800) 592-5489

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ HAZOUS WASTE SOLID, NOS (CONTAINS LEAD), PGII. | 001 | DT | 47,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. 0098109MDI / SWMU 89- LEAD CONTAMINATED SOILS AND ASH / ERG # 171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month 04 Day 16 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kurt Netemeyer
Signature: Kurt Netemeyer
Month 4 Day 16 Year 09

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Leroy Lehrig
Signature:
Month 4 Day 17 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2585534

7151 8C, 120

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1 210 020 770 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 006184850 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (REA. P O BOX 1 RADFORD VA 24141 Generator's Phone (540) 639-1651

Generator's Site Address (if different than mailing address) STATE ROUTE 114 RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN Teuck Co. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL 48350 N I-94 SERVICE DRIVE BELLEVILLE MI 48111 U.S. EPA ID Number: MID 980 794 991 Facility's Phone: 800 592-9469

| a. HM | 9. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ HAZCAT HAZARDOUS WASTE SOLID NOS D008 LEAD) PGII | 001 | DT | 50,000 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: C09816MIDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH ERG #171 - 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 16 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Daniel Abernathy Signature: Month: 04 Day: 16 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems): 1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Tonya Cougar Signature: Month: 04 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2585552

80,340 680

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VAT 213 022 130 | | (800) 424-9300 | 006184961 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (C21)
P.O. BOX 1
RADFORD VA 24143
Generator's Phone: (540) 639-7300

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PLANT
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: (800) 592-5405
U.S. EPA ID Number: MID 980 794 994

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZARDOUS WASTE SOLID, N.O.S. (D008 LEAD), PGIII | 001 | DT | 41,700 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. CCS3189MDI / SWMU 39 LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800 424 9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 04 Day 29 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bryan Heck — Signature: By Heck — Month 04 Day 29 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H141 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18b

Printed/Typed Name: Tanya Wright — Signature — Month 04 Day 30 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

917 3812 8c, 060

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 000 720 | | (800) 424-9300 | 006184960 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (REA / P.O. BOX 1 / RADFORD VA 24141 — Generator's Site Address (if different than mailing address): STATE ROUTE 114 / RADFORD VA 24141
Generator's Phone: (540) 639-7851

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL / 49350 N GRATIOT SERVICE DRIVE / BELLEVILLE MI 48111 — U.S. EPA ID Number: MID 980 724 371
Facility's Phone: (313) 397-8466

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ, HAZARDOUS WASTE, SOLID, N.O.S. (LEAD), 9, NA3077, PG III LEAD, RQ | | TT | 49,000 | P | D009 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI - SWMU 39- LEAD CONTAMINATED SOILS AND ASH - ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC / BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H Blankenship — Month: 04 — Day: 29 — Year: 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____
Transporter signature (for exports only): Date leaving U.S.: _____

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Chris Nitcher — Signature: [signature] — Month: 4 — Day: 29 — Year: 09

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H141 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Tanya Cougar — Signature: [signature] — Month: 04 — Day: 30 — Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

9167

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006213661 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P O BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 633-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|---|
| GENERATOR | X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 1 | DT | 52200 | P | D008 | | |
| | | 2. | | | | | | | |
| | | 3. | | | | | | | |
| | | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month: 04 Day: 20 Year: 09

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ivan Chapman — Signature: Ivan Chapman — Month: 04 Day: 20 Year: 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month: 04 Day: 20 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**

9163

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006213662 JJK |

**GENERATOR**

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) P.O. BOX 1, RADFORD, VA 24143 — Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address): STATE ROUTE 114, RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000 135 236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL, 49350 N I-94 SERVICE DRIVE, BELLEVILLE, MI 48111 — Facility's Phone: (800) 592-5489 — U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 1 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information: C098189MD / SWMU 38- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: HR Blankenship — Month 04 Day 20 Year 05

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WAYNE ELLIOTT — Signature: Wayne Elliott — Month 04 Day 20 Year 05

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nathaniel Ennis Jr — Signature: Nathaniel Ennis Jr — Month 04 Day 20 Year 05

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|---|
| | VA1 210 020 730 | 1 | (800) 424-9300 | 006213663 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA) / P.O. BOX 1 / RADFORD, VA 24143
Generator's Site Address (if different than mailing address): STATE ROUTE 114 / RADFORD, VA 24141
Generator's Phone: (540) 693-7631

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI / 49350 N I-94 SERVICE DRIVE / BELLEVILLE, MI 48111 — U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 1 | DT | 50,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 38- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: ALLIANT TECHSYSTEMS INC — Month/Day/Year: 04 20 09

**GENERATOR**

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leslie Salmon — Signature — Month/Day/Year: 04 20 09
Transporter 2 Printed/Typed Name — Signature — Month/Day/Year:

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month/Day/Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright — Signature — Month/Day/Year: 04 20 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**

7170

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1. Generator ID Number VA1 210 020 730 | 2. Page 1 of 1 | 3. Emergency Response Phone (800) 424-9300 | 4. Manifest Tracking Number 006213664 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address ALLIANT TECH SYSTEMS INC (RFA) P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK Co. — U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 1 | DT | 51,000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 10 Day 12 Year 09

**INTL**
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bruce Clover 7170 38800 — Signature: Bruce Clover — Month 10 Day 12 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a
Printed/Typed Name: Nathaniel Enright — Signature: Nathaniel Enright — Month 10 Day 12 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**

9168

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 730
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006213668 JJK

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA)
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 893-7631

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 1 | DT | 50000 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1. C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month Day Year: 04 20 09

**INT'L**
16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only):
Port of entry/exit:
Date leaving U.S.:

**TRANSPORTER**
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les JENNINGS 9168-38812
Signature:
Month Day Year: 04 20 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

**DESIGNATED FACILITY**
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year:
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nathaniel Enright
Signature:
Month Day Year: 04 20 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

9167-3881

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |
|---|---|---|---|
| VA1 210 020 730 | 1 | (800) 424-9300 | 006184860 JJK |

5. Generator's Name and Mailing Address: ALLIANT TECH SYSTEMS INC (RFA/
P.O. BOX 1
RADFORD, VA 24143
Generator's Phone: (540) 693-7631

Generator's Site Address (if different than mailing address):
STATE ROUTE 114
RADFORD, VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ, NA3077, HAZARDOUS WASTE SOLID, NOS (D008, LEAD), PGIII | 001 | DT | 49,500 | P | D008 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
C098169MDI / SWMU 39- LEAD CONTAMINATED SOILS AND ASH / ERG #171 / 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-424-9300 PROVIDED BY SHAW E & I VIA CONTRACT WITH CHEMTREC.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature: H R Blankenship — Month 04 Day 24 Year 09

**INT'L**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ivan Chapman — Signature: Ivan Chapman — Month 04 Day 24 Year 09
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Nastaniel Enright — Signature: Nastaniel Enright — Month 04 Day 24 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)**

Invoice: 40121313 Receipt 02-21 455842 Manifest 006213655JJK

6191

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | 1 Generator ID Number | 2. Page 1 of | 3 Emergency Response Phone | 4 Manifest Tracking Number 006213655 JJK |
|---|---|---|---|---|

5. Generator's Name and Mailing Address / Generator's Site Address (if different than mailing address)

Generator's Phone

6. Transporter 1 Company Name: BEELMAN TRUCK CO. — U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

[illegible] SERVICE DRIVE

Facility's Phone

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. [illegible] | 1 | | 51,000 | | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

[illegible]

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Signature — Month 04 Day 17 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.
Transporter signature (for exports only)

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: RAY STAFF — Signature — Month 4 Day 17 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarnacki — Signature — Month 4 Day 17 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



2583994

Invoice: 40121313 Receipt 02-21 455845 Manifest 006213656JJK

Please print or type. Form designed for use on elite (12-pitch) typewriter.

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number
2. Page 1 of 1
3. Emergency Response Phone (800) 424-9300
4. Manifest Tracking Number: 006213656 JJK

**GENERATOR**

5. Generator's Name and Mailing Address
P.O. BOX [illegible]
RADFORD VA 24141
Generator's Phone [illegible]

Generator's Site Address (if different than mailing address)
STATE ROUTE 114
RADFORD VA 24141

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR 000135236

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
[illegible]
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone [illegible]
U.S. EPA ID Number [illegible]

| 9a HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. [illegible] HAZARDOUS WASTE SOLID, N.O.S. (D008) [illegible] | 1 | DT | 51,000 | P | [illegible] |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
[illegible] CONTAMINATED SOIL MANIFEST #[illegible] 24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300 PROVIDED BY [illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H.R. Blankenship
Month 04 Day 17 Year 09

**INTL**

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit
Transporter signature (for exports only): Date leaving U.S.

**TRANSPORTER**

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry KNAPP 7177/3802
Signature: Jerry Knapp
Month 4 Day 17 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tavrachi
Signature: David Tavrachi
Month 4 Day 17 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2583984

7162

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: VA1 210 020 720
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: **006213658 JJK**

5. Generator's Name and Mailing Address: P O BOX 1 RADFORD VA 24142
Generator's Site Address (if different than mailing address): STATE ROUTE 114 RADFORD VA 24141
Generator's Phone: 540 639 7201

6. Transporter 1 Company Name: BEELMAN TRUCK CO.
U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PLANT
48350 W 12 MILE RD NOVI MI 48377
U.S. EPA ID Number: MID 000 724 831
Facility's Phone: (800) 592-5489

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No | Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. RQ, NA 3077, HAZARDOUS WASTE, SOLID, N.O.S. (D008), 9, III, PG III | 1 | TT | 51,800 | P | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: CONTAINS LEAD CONTAMINATED SOIL AND ASH FROM BRIDGE DEMOLITION. FOR EMERGENCY RESPONSE CONTACT CHEMTREC 1-800-424-9300 PROFILE # 100024 2211 PROVIDED BY JOHN FAY. RETURN WITH SHIPMENTS

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR
Signature: H R Blankenship
Month: 04 Day: 17 Year: 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven M Wyatt
Signature: Steven M Wyatt
Month: 04 Day: 17 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: David Tarnacki
Signature: David Tarnacki
Month: 4 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2583978

Invoice: 40121313 Receipt 02-21 455847 Manifest 006213657JJK

7175

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number [illegible] 2. Page 1 of [illegible] 3. Emergency Response Phone [illegible] 4. Manifest Tracking Number **006213657 JJK**

5. Generator's Name and Mailing Address [illegible] Generator's Site Address (if different than mailing address)
[illegible] STATE ROUTE 114
[illegible]
Generator's Phone: [illegible]

6. Transporter 1 Company Name: BEELMAN TRUCK CO. U.S. EPA ID Number: ILR000135236

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address [illegible] U.S. EPA ID Number [illegible]
[illegible]
Facility's Phone: [illegible]

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. [illegible] | 1 | [illegible] | 50,000 | | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
[illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ALLIANT TECHSYSTEMS INC BY: H.R. BLANKENSHIP, TRAFFIC ADMINISTRATOR Signature: H R Blankenship Month: 04 Day: 17 Year: 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: ROBERT [illegible] 7175 3FF03 Signature: [signature] Month: 4 Day: 17 Year: 09
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. [illegible] 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: David Tarnacki Signature: [signature] Month: 4 Day: 17 Year: 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



2583972

# Appendix C-2

# Certificates of Disposal

Invoice: 40123566 Receipt 02-21 456256 Cod 006184931JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184931 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184948JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40123566 Receipt 02-21 456275 Cod 006184948JJK

2605880

Page 3 of 25

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 00618 4950 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40123566 Receipt 02-21 456286 Cod 00618 4950JJK

Page 4 of 25

2805315

Invoice: 40123566 Receipt 02-21 456301 Cod 006184952JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184952 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Stephanie J Enright

Invoice: 40123566 Receipt 02-21 456302 Cod 006184951JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184951JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Heather J Emrich

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40123566 Receipt 02-21 456303 Cod 006184954JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184954 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Nathaniel J Enright

Invoice: 40123566 Receipt 02-21 456304 Cod 006184953JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184953 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Enright

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184955

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathleen J Enright

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40123566 Receipt 02-21 456308 Cod 006184955JJK

Page 9 of 25

2606633

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 00618495 8 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathleen J Emry



Invoice: 40123566

Receipt 02-21 456309

Cod 00618495 8JJK

Invoice: 40123566

Receipt 02-21 456310

Cod 006184956JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184956 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathleen J. Emry

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184957 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Richard J Enright

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40123566 Receipt 02-21 456311 Cod 006184957JJK

Page 12 of 25

2606318

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184959 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184962 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Norton J Emy



Invoice: 40127132

Receipt 02-21 456873

Cod 006184962JJK

Invoice: 40127132 Receipt 02-21 456875 Cod 006184982JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184982 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Enright

Invoice: 40127132 Receipt 02-21 456878 Cod 006184983JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184983 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Richard J Emmett

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184985JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kenneth J Emyth

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40127132 Receipt 02-21 456879 Cod 006184985JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184986 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Nathaniel J Enright

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40127132 Receipt 02-21 456880 Cod 006184986JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184987JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Kathleen J Enright

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40127132 Receipt 02-21 456881 Cod 006184987JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184989JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Enright

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40127132 Receipt 02-21 456882 Cod 006184989JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184988JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Daniel J Emyth



Invoice: 40127132 Receipt 02-21 456883 Cod 006184988JJK

Page 9 of 29

2634465

# CERTIFICATE OF DISPOSAL

*This certificate is to verify the wastes specified on Manifest #* 006184990 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathleen J Emry

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Form # REC-FM-013-BEL

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8/25/08

Invoice: 40127132

Receipt 02-21 456884

Cod 006184990JJK



2534446

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184991 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40127132 Receipt 02-21 456898 Cod 006184991JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184994 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MIDD48090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40127132 Receipt 02-21 456900 Cod 006184994JJK



2635136

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184993 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Harland J Emyth

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40127132 Receipt 02-21 456901 Cod 006184993JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 00618 4995 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40127132 Receipt 02-21 456902 Cod 00618499SJJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184996 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40127132 Receipt 02-21 456903 Cod 006184996JJK

2635119

Page 15 of 29

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006189031JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☐ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128911

Receipt 02-21 457180

Cod 006189031JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184984 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Cod 006184984JJK

Receipt 02-21 456877

Invoice: 40130794

2663021

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184992JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40127758 Receipt 02-21 456899 Cod 006184992JJK

2637255

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 004686336 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Judith Reid

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128804 Receipt 02-21 457149 Cod 004686336JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 004686337 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Judith Reid



Invoice: 40128804 Receipt 02-21 457178 Cod 004686337JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184969 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090635)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Emry



Invoice: 40126670

Receipt 02-21 456760

Cod 006184969JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184970 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kenneth J Emry

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40126670 Receipt 02-21 456761 Cod 006184970JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184968 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724841)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Emry

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40126670 Receipt 02-21 456762 Cod 006184968JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184967 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Richard J Emry

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40126670 Receipt 02-21 456763 Cod 006184967JJK

Invoice: 40126670 Receipt 02-21 456764 Cod 006184974JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184974 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathaniel J Emyth

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40126670 Receipt 02-21 456766 Cod 006184972JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184972 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Nathaniel J Enz

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184973 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40126670

Receipt 02-21 456767

Cod 006184973JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184975 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID 048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathleen J. Enright

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40126670 Receipt 02-21 456768 Cod 006184975JJK

Invoice: 40126670

Receipt 02-21 456769

Cod 006184976JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006 184976 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J. Engle

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184977JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40126670 Receipt 02-21 456788 Cod 006184977JJK

2630375

Page 11 of 31

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184979JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40126670 Receipt 02-21 456789 Cod 006184979JJK

2630367

Page 12 of 31

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184980 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40126670 Receipt 02-21 456790 Cod 006184980JJK

2629990

Page 13 of 31

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184981JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40126670 Receipt 02-21 456791 Cod 006184981JJK

2630413

Page 14 of 31

Invoice: 40126670 Receipt 02-21 456792 Cod 006184978JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest #. 006184978 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048509633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

Invoice: 40126670 Receipt 02-21 456765 Cor 006184971JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184971 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Heather J Emmy

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 004686330 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128655 Receipt 02-21 457077 Cod 004686330JJK

2643301

Page 2 of 11

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 004686331JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128655 Receipt 02-21 457078 Cod 004686331JJK

2643293

Page 3 of 11

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 004686332JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Cod 004686332JJK

Receipt 02-21 457079

Invoice: 40128655

2643163

Page 4 of 11

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 004686333JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128655 Receipt 02-21 457082 Cod 004686333JJK

2643155

Page 5 of 11

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 00468618 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128655 Receipt 02-21 457099 Cod 00468618 7JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006189030JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID980724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40129430 Receipt 02-21 457185 Cod 006189030JJK

2650904

Invoice: 40129430 Receipt 02-21 457196 Cod 006189032JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006189032 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000721831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006189034 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Judy Reid

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40129430 Receipt 02-21 457203 Cod 006189034JJK

# CERTIFICATE OF DISPOSAL

Cod 006189033JJK

Receipt 02-21 457204

Invoice: 40129430

2652100

*FOR MANIFESTED PCB WASTE*

This certificate is to verify the wastes identified as PCB Solids

and specified on Manifest # 006189033JJK, Line Item 1 has been landfilled on

May 21, 2009 in accordance with all local, state and federal regualtions by:

## *Wayne Disposal, Inc.*

(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111
Telephone: 1-800-KWALITY (592-5489)
Fax: 1-800-KWALFAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: Geoffrey Reed

Cod 006189035JJK

Receipt 02-21 457218

Invoice: 40129430

# CERTIFICATE OF DISPOSAL

2651465

This certificate is to verify the wastes specified on Manifest # 006189035 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID980724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006189030JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID980724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40129430 Receipt 02-21 457185 Cod 006189030JJK

2650904

Invoice: 40129430 Receipt 02-21 457196 Cod 006189032JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006189032 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000721831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006189034 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Judy Reid

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40129430 Receipt 02-21 457203 Cod 006189034JJK

# CERTIFICATE OF DISPOSAL

Cod 006189033JJK

Receipt 02-21 457204

Invoice: 40129430

2652100

*FOR MANIFESTED PCB WASTE*

This certificate is to verify the wastes identified as PCB Solids

and specified on Manifest # 006189033JJK, Line Item 1 has been landfilled on

May 21, 2009 in accordance with all local, state and federal regualtions by:

## *Wayne Disposal, Inc.*

(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111
Telephone: 1-800-KWALITY (592-5489)
Fax: 1-800-KWALFAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: Geoffrey Reed

Cod 006189035JJK

Receipt 02-21 457218

Invoice: 40129430

# CERTIFICATE OF DISPOSAL

2651465

This certificate is to verify the wastes specified on Manifest # 006189035 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID980724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184963 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Judith Reed



Invoice: 40128743

Receipt 02-21 457122

Cod 006184963JJK

Invoice: 40128743 Receipt 02-21 457124 Cod 006184965JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184965 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184964JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128743 Receipt 02-21 457125 Cod 006184964JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 004686190 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128743 Receipt 02-21 457130 Cod 004686190JJK

2645918

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184966JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128743 Receipt 02-21 457132 Cod 006184966JJK

2645935

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 004086334JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID980724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40128743 Receipt 02-21 457139 Cod 004686334JJK

2646056

Page 7 of 15

Invoice: 40128743 Receipt 02-21 457140 Cod 004686335JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 004686335 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

Invoice: 40122777 Receipt 02-21 456111 Cod 006184865JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184865 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048509633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathanne J Emmett

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184864 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kenneth J Emry Jr

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40122777 Receipt 02-21 456112 Cod 006184864JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184925 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40122777 Receipt 02-21 456113 Cod 006184925JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184926 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Heather J Enyeart

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40122777 Receipt 02-21 456114 Cod 006184926JJK

Invoice: 40122777 Receipt 02-21 456115 Cod 006184862JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184862JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184863JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000172483) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____



Invoice: 40122777 Receipt 02-21 456116 Cod 006184863JJK

2598150

Page 7 of 27

Invoice: 40122777 Receipt 02-21 456118 Cod 006184861JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184861JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184859JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724511)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN. 48111



Invoice: 40122777

Receipt 02-21 456119

Cod 006184859JJK

2398210

Invoice: 40122777 Receipt 02-21 456120 Cod 006184876JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184876 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40122777 Receipt 02-21 456125 Cod 006184927JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184927 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Heather J Emyth

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184928JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Robert J Emgl

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40122777 Receipt 02-21 456128 Cod 006184928JJK

Invoice: 40122777 Receipt 02-21 456171 Cod 006184929JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184929JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40122777 Receipt 02-21 456172 Cod 006184930JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184930 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID039090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Richard J Smyth

Invoice: 40121898 Receipt 02-21 455933 Cod 006213666JK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213666 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Harbond J Emig

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40121898 Receipt 02-21 455942 Cod 006184911JJK

2589502

Page 3 of 21

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184911JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

Invoice: 40121898 Receipt 02-21 455943 Cod 006184867JK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184867JK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-595-5329

Authorized Signature: _____

Invoice: 40121898 Receipt 02-21 455944 Cod 006213669JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213669 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184866JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40121898 Receipt 02-21 455945 Cod 006184866JJK

Invoice: 40121898 Receipt 02-21 455946 Cod 006213667JJK

2589681

Page 7 of 21

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213667JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

Invoice: 40121898 Receipt 02-21 455947 Cod 006184874JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184874 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☐ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID980906633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40121898 Receipt 02-21 455948 Cod 006184875JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184875JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant *(EPA I.D. # MID000724831)*

☐ Wayne Disposal, Inc. *(EPA I.D. # MID048090633)*

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184873JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____



Invoice: 40121898 Receipt 02-21 455949 Cod 006184873JJK

2589330

Page 10 of 21

Invoice: 40121898 Receipt 02-21 455955 Cod 006213665JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213665JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184869 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Matthew J Emry



Invoice: 40120617

Receipt 02-21 455748

Cod 006184869JJK

Invoice: 40120617 Receipt 02-21 455749 Cod 006184868JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184868 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Matthew J Ennis

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



2579463



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# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184871JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Matthew J Enright

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40120617

Receipt 02-21 455750

Cod 006184871JJK

Invoice: 40120617

Receipt 02-21 455752

Cod 006184870JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184870 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Robert J Emry

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184912 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Emig



Invoice: 40122087 Receipt 02-21 456020 Cod 006184912JJK

Page 2 of 31

2592794

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184913 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID018090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Nathaniel J Smyth

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40122087 Receipt 02-21 456021 Cod 006184913JJK



2592782

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184914 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Kathaniel J Emry



Invoice: 40122087 Receipt 02-21 456022 Cod 006184914JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184915 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____



Invoice: 40122087 Receipt 02-21 456023 Cod 006184915JJK

Invoice: 40122087 Receipt 02-21 456025 Cod 006184917JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184917 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Emry

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184916 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathleen J Emry



Invoice: 40122087

Receipt 02-21 456026

Cod 006184916JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184918 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Emry Jr



Invoice: 40122087 Receipt 02-21 456027 Cod 006184918JJK

Page 8 of 31

2592768

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184919 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et sea.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MIDD 18090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Enzyl



Invoice: 40122087

Receipt 02-21 456028

Cod 006184919JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184920JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____



Invoice: 40122087 Receipt 02-21 456029 Cod 006184920JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184923JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et sea.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathleen J Emry



Invoice: 40122087

Receipt 02-21 456030

Cod 006184923JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184922JK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5829

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40122087 Receipt 02-21 456045 Cod 006184922JJK



2593989

Invoice: 40122087 Receipt 02-21 456046 Cod 006184857JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184857JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184924JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724833)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40122087

Receipt 02-21 456047

Cod 006184924JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest.# 006184921JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40122087

Receipt 02-21 456048

Cod 006184921JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184858JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40122087 Receipt 02-21 456049 Cod 006184858JJK

Invoice: 40121242

Receipt 02-21 455811

Cod 006213660JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213660 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

Invoice: 40121242 Receipt 02-21 455812 Cod 006184851JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184857JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184852 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40121242 Receipt 02-21 455814 Cod 006184852JJK

2582839

Page 4 of 7

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184933 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Faith J Smyth

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40123152 Receipt 02-21 456183 Cod 006184933JJK

Invoice: 40123152 Receipt 02-21 456184 Cod 006184932JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184932 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MIDD000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID052809033) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111





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# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184935 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et sea.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Emry

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40123152 Receipt 02-21 456186 Cod 006184935JJK

Invoice: 40123152 Receipt 02-21 456187 Cod 006184934JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184934 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Emry

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184940 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: (*Please check one*)

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40123152 Receipt 02-21 456188 Cod 006184940JJK

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2600882

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184941 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Harlan J Enright



Invoice: 40123152 Receipt 02-21 456189 Cod 006184941JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184942 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



Invoice: 40123152 Receipt 02-21 456190 Cod 006184942JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184943JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724835) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Nathaniel J Enright



Invoice: 40123152 Receipt 02-21 456192 Cod 006184943JJK

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2601177

Invoice: 40123152

Receipt 02-21 456193

Cod 00618494SJJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 00618494S JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID980724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Kathleen J Smith

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184944 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Stephanie J Emry

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40123152 Receipt 02-21 456194 Cod 006184944JJK

Invoice: 40123152 Receipt 02-21 456195 Cod 006184947JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184947 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: Nathaniel J. Emry

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184946 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID980723831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Smyth

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Form # REC-FM-013-BEL

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8/25/08

Invoice: 40123152

Receipt 02-21 456196

Cod 006184946JJK



2601247

Invoice: 40121313 Receipt 02-21 455842 Cod 006213655JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213655 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID038090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

Invoice: 40121313 Receipt 02-21 455845 Cod 006213656JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213656JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

| | | |
|---|---|---|
| FACILITY NAME: *(Please check one)* | ☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724835) | ☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633) |
| ADDRESS: | 49350 N. I-94 Service Drive<br>Belleville, Michigan 48111 | |
| PHONE NUMBER: | 1-800-592-5489 | |
| FAX NUMBER: | 1-800-593-5329 | |

Authorized Signature: _____

Invoice: 40121313 Receipt 02-21 455846 Cod 006213658JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213658 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213657 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40121387 Receipt 02-21 455753 Cod 006184872JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184872JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40121387 Receipt 02-21 455777 Cod 006184855JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184855 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724834)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



2585394



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8/25/08

Invoice: 40121387 Receipt 02-21 455813 Cod 006184848JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184848JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184853JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40121387 Receipt 02-21 455815 Cod 006184853JJK
2585506
Page 5 of 21

Invoice: 40121387 Receipt 02-21 455816 Cod 006184854JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184854JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____



2585484

Invoice: 40121387 Receipt 02-21 455817 Cod 006213659JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213659 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

Invoice: 40121387 Receipt 02-21 455818 Cod 006184856JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184856JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID980890633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

Invoice: 40121387 Receipt 02-21 455819 Cod 006184846JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184846 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

Invoice: 40121387 Receipt 02-21 455821 Cod 006184847JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184847 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40121387 Receipt 02-21 455825 Cod 006184850JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184850JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40123705 Receipt 02-21 456316 Cod 006184961JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184961JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Invoice: 40123705 Receipt 02-21 456317 Cod 006184960JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184960 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

Invoice: 40121563

Receipt 02-21 455927

Cod 00621366IJJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 00621366 IJJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Kathleen J Emyke

Invoice: 40121563

Receipt 02-21 455928

Cod 006213662JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213662JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Enright

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 00621363 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Harold J Emry

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40121563

Receipt 02-21 455931

Cod 00621363JJK

Page 4 of 11

2588181

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 00621366 4 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☑ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Nathaniel J Engle

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Invoice: 40121563

Receipt 02-21 455932

Cod 00621366 4JJK

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006213668 JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: Richard J Emyk



Invoice: 40121563

Receipt 02-21 455934

Cod 006213668JJK

Page 6 of 11

2587911

Invoice: 40123003 Receipt 02-21 456117 Cod 006184860JJK

2598164

Page 2 of 3

# CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # 006184860JJK

have been properly disposed of in accordance with all local, state and federal regulations.

*"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.*

FACILITY NAME: *(Please check one)*

☒ Michigan Disposal Waste Treatment Plant (EPA I.D. # MID000724831)

☐ Wayne Disposal, Inc. (EPA I.D. # MID048090633)

ADDRESS: 49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER: 1-800-592-5489

FAX NUMBER: 1-800-593-5329

Authorized Signature: _____

# Appendix C-3

# Profiles

# WASTE CHARACTERIZATION REPORT

Tracking #

☐ ***I authorize EQ – The Environmental Quality Company to choose the appropriate facility and method of waste management from the technologies offered at the EQ facilities identified below.***

| | | | |
|---|---|---|---|
| ☒ **Michigan Disposal Waste Treatment Plant** (Stabilization and Treatment) | 49350 N. I-94 Service Drive, Belleville, MI 48111<br>Phone: 800-592-5489 Fax: 800-592-5329 | EPA ID # MID 000 724 831 |
| ☐ **Wayne Disposal, Inc. Site #2 Landfill** (Hazardous & PCB Waste Landfill) | 49350 N. I-94 Service Drive, Belleville, MI 48111<br>Phone: 800-592-5489 Fax: 800-592-5329 | EPA ID # MID 048 090 633 |
| ☐ **EQ Detroit, Inc.** (Stabilization, Wastewater Treatment) | 1923 Frederick Street, Detroit, MI 48211<br>Phone: (313) 923-0080 Fax: 313-923-3375 | EPA ID # MID 980 991 566 |
| ☐ **EQ Resource Recovery, Inc.** (Solvent Recycling, Fuel Blending, WW Treatment) | 36345 Van Born Road, Romulus, MI 48174<br>Phone: 866-373-8357 Fax: 734-326-4033 | EPA ID # MID 060 975 844 |
| ☐ **EQ North Carolina** (Stabilization, Treatment, Labpack Decommissioning) | 1005 Investment Blvd, Apex, NC 27502<br>Phone: 919-363-4700 Fax: 919-363-4714 | EPA ID # NCD 982 170 292 |
| ☐ **EQ Florida, Inc.** (Drum Consolidation, Labpack Decommissioning) | 7202 East 8th Ave, Tampa, FL 33619<br>Phone: 813-623-5463 Fax: 813-628-0842 | EPA ID # FLD 981 932 494 |
| ☐ **EQ Transfer & Processing** (Drum Transfer/Universal Waste Handling) | 2000 Ferry Street, Detroit, MI 48211<br>Phone: 313-923-0080 Fax: 313-922-8419 | EPA ID # MIK 939 928 313 |
| ☐ **EQ Indianapolis** (Drum Transfer/Non-Hazardous Waste Processing) | 4000 West 10th Street, Indianapolis, IN 46222<br>Phone: 317-247-7160 Fax: 317-247-7170 | EPA ID # IND 161 049 309 |
| ☐ **EQ Atlanta** (Drum Transfer/Non-Hazardous Waste Processing) | 5600 Fulton Industrial Blvd SW, Atlanta, GA 30336<br>Phone: 404-494-3520 Fax: 404-494-3560 | EPA ID # GAR 000 039 776 |
| ☐ **EQ Augusta, Inc.** (Wastewater Treatment) | 3920 Goshen Industrial Blvd, Augusta, GA 30906<br>Phone: 706-771-9100 Fax: 706-771-9124 | EPA ID # GAR 000 011 817 |

## Waste Common Name: SWMU 39 - Lead Contaminated Soils and Ash

### *Section 1 – Generator & Customer Information*

SIC/NAICS* 2892

**Generator EPA ID #** VA1210020730

Generator Alliant Techsystems, Inc. (RFAAP)

Facility Address State Rout 114

City Radford State VA Zip 24141

County Montgomery/Pulaski

**Mailing Address** P.O. Box 1

City Radoford State VA Zip 24143

**Generator Contact** Jeremy Flint

Title Environmental Engineer

Phone 540-639-7668 Fax 540-639-8109

*For a list of NAICS codes, please refer to Section 9 of the EQ Resource Guide.

***Internal Use Only: EQ Division***

EQ Customer No.

**Invoicing Company** Shaw Environmental

Address P.O. Box 98519

City Baton Rouge State LA Zip 70884

Country USA

**Invoicing Contact**

Phone Fax

**Technical Contact** Beth Crawford

Phone 419-425-6071 Fax

Mobile Pager

E-mail beth.crawford@shawgrp.com

### *Section 2 – Shipping & Packaging Information*

2.1) Shipping Volume & Frequency 2700-3000 tons

☒ One Time Only ☐ Year ☐ Quarter ☐ Month

2.2) DOT Shipping Name RQ, NA3077, Hazardous Waste Solid, n.o.s. (D008, lead) PG III

2.3) Is this waste surcharge exempt? ☒ Yes ☐ No

If yes, please attach a surcharge exemption form, found in Section 2 of the EQ Resource Guide.

2.4) Packaging **(check all that apply)**

☐ Bulk Solid ($Yd^3$ < 2000 lbs/$yd^3$)
☒ Bulk Solid (Ton >2000 lbs/$yd^3$)
☐ Bulk Liquids (Gallon)
☐ Totes, Size
☐ Cubic Yard Boxes/Bags
☐ Drums, Size
☐ Other (palletized, 5 gal. Pail, etc.)

Quoted bulk disposal charges for solid materials will be billed by the cubic yard, if the waste density is less than 2,000lbs./cubic yard. If waste density is greater than 2,000 lbs./cubic yard, then bulk disposal charges will be billed by the ton, regardless of the approved container.

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## *Section 3 – Physical Characteristics*

3.1) Color Brown/Gray 3.2) Odor None

3.3) Does this waste contain any "Potentially Odorous Constituents" as defined in the EQ Resource Guide? (Section 3) ☐ Yes ☒ No

| | | | | | |
|---|---|---|---|---|---|
| 3.4) Physical State at 70°F: | ☒ Solid | ☐ Dust/Powder | ☐ Liquid | ☐ Sludge | |
| 3.5) What is the pH of this waste? | ☐ ≤2 | ☒ 2.1-4.9 | ☐ 5-10 | ☐ 10.1-12.4 | ☐ ≥12.5 |
| 3.6) What is the flash point of this waste? | ☐ <90°F | ☐ 90-140°F | ☐ 140-199°F | ☒ >200°F | |
| 3.7) Does this waste contain? **(check all that apply)** | | ☐ **None** | ☐ Free Liquids | ☐ Oily Residue | ☐ Metal Fines |
| ☐ Biodegradable Sorbants | ☐ Amines | ☐ Ammonia | ☐ Water Reactive | ☐ Biohazard | ☐ Aluminum |
| ☐ Shock Sensitive Waste | ☐ Reactive Waste | ☐ Radioactive Waste | ☒ Explosives | ☐ Pyrophoric Waste | ☐ Isocyanates |
| ☐ Asbestos – non-friable | ☐ Asbestos – friable | ☒ Dioxins | ☒ Furans | **TRACE amounts ONLY** see data | |

## *Section 4 – Waste Composition and Generating Process*

4.1) Describe the physical composition of the waste (i.e., soil, water, PPE, debris, key chemical compounds, etc.)

Soil 95 to 100 % TCLP Lead 7.9 mg/L to 8.4 mg/L %

PPE Expendables 0 to 5 % Total Lead 0 to 1.5 %

**Total: 100%**

4.2) Provide a *detailed* description of the process generating this waste (attach flow diagram if available).
Removal of two unlined earthen ponds associated with the on-site incineration of explosive waste. The ponds received scrubber and precooler quench water from the air pollution control devices for the incinerator exhaust

## *Section 5 – Is This Hazardous Waste?*

*Please refer to Section 5 of the EQ Resource Guide for a list of waste codes*

| **As determined by 40 CFR, Part 261 and State Rules:** | | | **Please list applicable waste code(s):** |
|---|---|---|---|
| 5.1) Is this an EPA RCRA listed hazardous waste (F, K, P or U)? | ☐ Yes | ☒ No | |
| 5.2) Is this an EPA RCRA characteristic hazardous waste (D001-D043)? | ☒ Yes | ☐ No | D008 |
| 5.3) Do any State Hazardous Waste Codes apply? | ☐ Yes | ☒ No | |
| 5.4) Is this waste intended for wastewater treatment? | ☐ Yes* | ☒ No | |

***If you answered 'no' to 5.1, 5.2, and 5.3, please skip to Section 7. *If you answered 'yes' to 5.4, please attach the Waste Characterization Report Addendum found in Section 7 of the EQ Resource Guide.***

## *Section 6 – Hazardous Wastes*

| | | |
|---|---|---|
| 6.1) Does this waste exceed Land Disposal Restriction levels? | ☒ Yes | ☐ No |
| 6.1a) If this waste stream is greater than 50% soil, does it meet the alternative soil treatment standards of 40 CFR 268.49? | ☐ Yes | ☒ No |
| 6.1b) Does this waste contain greater than 50% debris, by volume? (Debris is greater than 2.5 inches in size.) | ☐ Yes | ☒ No |
| 6.2) Is the waste an oxidizer (D001)? | ☐ Yes | ☒ No |
| 6.3) Does this waste contain reactive cyanide ≥ 250 ppm (D003)? | ☐ Yes | ☒ No |
| 6.4) Does this waste contain reactive sulfide ≥ 500 ppm (D003)? | ☐ Yes | ☒ No |

6.5) Please indicate which constituent concentrations are below or above the regulatory level. Please indicate the basis used in the determination. Either "Below" or "Above" **MUST** be checked for each constituent.

**Based On:** ☒ **Generator Knowledge** ☒ **Analysis*** ☐ **MSDS***
***Please attach a copy. Analysis or MSDS are required for EQFL Non-hazardous wastes.**

| Code | | Regulatory Level TCLP (mg/l) | Concentration (if above) | Code | | Regulatory Level TCLP (mg/l) | Concentration (if above) |
|---|---|---|---|---|---|---|---|
| D004 | Arsenic | 5 | ☒ Below ☐ Above | D024 | m-Cresol | 200 | ☐ Below ☐ Above |
| D005 | Barium | 100 | ☒ Below ☐ Above | D025 | p-Cresol | 200 | ☐ Below ☐ Above |
| D006 | Cadmium | 1 | ☒ Below ☐ Above | D026 | Cresols | 200 | ☐ Below ☐ Above |
| D007 | Chromium | 5 | ☒ Below ☐ Above | D027 | 1,4-Dichlorobenzene | 7.5 | ☐ Below ☐ Above |
| D008 | Lead | 5 | ☐ Below ☒ Above 8.4 mg/L | D028 | 1,2-Dicholoroethane | 0.5 | ☐ Below ☐ Above |
| D009 | Mercury | 0.2 | ☒ Below ☐ Above | D029 | 1,1-Dichloroethylene | 0.7 | ☐ Below ☐ Above |
| D010 | Selenium | 1 | ☒ Below ☐ Above | D030 | 2,4-Dinitrotoluene | 0.13 | ☐ Below ☐ Above |
| D011 | Silver | 5 | ☒ Below ☐ Above | D031 | Heptachlor | 0.008 | ☐ Below ☐ Above |
| D012 | Endrin | 0.02 | ☐ Below ☐ Above | D032 | Hexachlorobenzene | 0.13 | ☐ Below ☐ Above |
| D013 | Lindane | 0.4 | ☐ Below ☐ Above | D033 | Hexachlorobutadiene | 0.5 | ☐ Below ☐ Above |
| D014 | Methoxychlor | 10 | ☐ Below ☐ Above | D034 | Hexachloroethane | 3.0 | ☐ Below ☐ Above |
| D015 | Toxaphene | 0.5 | ☐ Below ☐ Above | D035 | Methyl Ethyl Ketone | 200 | ☐ Below ☐ Above |
| D016 | 2,4-D | 10 | ☐ Below ☐ Above | D036 | Nitrobenzene | 2 | ☐ Below ☐ Above |
| D017 | 2,4,5-TP (Silvex) | 1 | ☐ Below ☐ Above | D037 | Pentachlorophenol | 100 | ☐ Below ☐ Above |
| D018 | Benzene | 0.5 | ☐ Below ☐ Above | D038 | Pyridine | 5 | ☐ Below ☐ Above |
| D019 | Carbon Tetrachloride | 0.5 | ☐ Below ☐ Above | D039 | Tetrachloroethylene | 0.7 | ☐ Below ☐ Above |
| D020 | Chlordane | 0.03 | ☐ Below ☐ Above | D040 | Trichloroethylene | 0.5 | ☐ Below ☐ Above |
| D021 | Chlorobenzene | 100 | ☐ Below ☐ Above | D041 | 2,4,5-Trichlorophenol | 400 | ☐ Below ☐ Above |
| D022 | Chloroform | 6.0 | ☐ Below ☐ Above | D042 | 2,4,6-Trichlorophenol | 2 | ☐ Below ☐ Above |
| D023 | o-Cresol | 200 | ☐ Below ☐ Above | D043 | Vinyl Chloride | 0.2 | ☐ Below ☐ Above |

6.6) If this is a characteristic hazardous waste, does it contain underlying hazardous constituents? ☒ Yes ☒ No
If yes, please list the constituents in Section 11.

## Section 7 – Non-Hazardous Wastes

*For a complete list of non-hazardous waste codes, please refer to Section 7 of the EQ Resource Guide*

**Please list applicable waste code:**

7.1) Is this a Michigan non-hazardous liquid industrial waste? ☐ Yes ☒ No
7.2) Is this a Universal waste? ☐ Yes ☒ No
7.3) Is this a Recyclable Commodity? (e.g.: computer monitors, free mercury, etc.) ☐ Yes ☒ No
7.4) Is this waste a recoverable petroleum product? ☐ Yes* ☒ No
7.5) Is this waste used oil as defined by 40 CFR Part 279? ☐ Yes* ☒ No

***If you answered 'yes' to questions 7.4 or 7.5 please attach the Waste Characterization Report Addendum found in Section 7 of the EQ Resource Guide.***

## Section 8 – TSCA Information

8.1) What is the concentration of PCBs in the waste? ☒ None ☐ 0-5 ppm ☐ 6-49 ppm ☐ 50-499 ppm ☐ 500+ ppm
8.2) Does the waste contain PCB contamination from a source with a concentration ≥ 50 ppm? ☐ Yes ☒ No
***If you answered "no" to 8.1 and 8.2, please skip to Section 9.***
8.3) Has this waste been processed into a non-liquid form? ☐ Yes ☐ No
If yes, what was the concentration of PCBs prior to processing? ☐ N/A ☐ 0-499 ppm ☐ 500+ ppm
8.4) Is the non-liquid PCB waste in the form of soil, rags, debris, or other contaminated media? ☐ Yes ☐ No
8.5) Are you a PCB capacitor manufacturer or a PCB equipment manufacturer? ☐ Yes ☐ No
8.6) Has the PCB Article (e.g., transformer, hydraulic machine, PCB-contaminated electrical equipment) been drained/flushed of all PCBs and decontaminated in accordance with 40 CFR 761.60(b)? ☐ N/A ☐ Yes ☐ No

## Section 9 – Clean Air Act Information

| NESHAP SIC* | | |
|---|---|---|
| 2812 | 2836 | 2875 |
| 2813 | 2841 | 2879 |
| 2816 | 2842 | 2891 |
| 2819 | 2843 | 2892 |
| 2821 | 2844 | 2893 |
| 2822 | 2851 | 2895 |
| 2823 | 2861 | 2899 |
| 2824 | 2865 | 2911 |
| 2833 | 2869 | 3312 |
| 2834 | 2873 | 4953 |
| 2835 | 2874 | 9511 |

9.1) Is this waste subject to regulation under 40 CFR, Part 63, Subpart DD or 40 CFR, Part 264, Subpart CC (RCRA)? ☐ Yes ☒ No
(Does the waste contain >500 ppm Volatile Organic Hazardous Air Pollutants – VOHAP's or Volatile Organic Compounds – VOC's?)
*For a complete list of VOHAP's, please see Section 11 of the EQ Resource Guide*
9.2) Is the site, or waste, subject to any other MACT or NESHAP? ☒ Yes, please specify: MANY, waste is not ☐ No
9.3) Does this waste stream contain Benzene? ☐ Yes ☒ No
***If you answered "no" to 9.3, please skip to Section 10.***
9.4) Does the waste stream come from a facility with one of the SIC/NAICS codes listed under the Benzene NESHAP identified in 40 CFR 61, Subpart FF? ☐ Yes ☐ No
9.5) Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) ≥10 Mg/year? ☐ Yes ☐ No
For assistance in calculating the TAB, please see the TAB Worksheet in Section 9 of the EQ Resource Guide.
***If you answered "no" to question 9.4 and 9.5, please skip to Section 10.***
9.6) Does the waste contain >10% water? ☐ Yes ☐ No
9.7) What is the TAB quantity for your facility? _____Mg/Year
9.8) Does the waste contain >1.0 mg/kg total Benzene? ☐ Yes ☐ No
9.9) What is the total Benzene concentration in your waste? _____Percent or _____ ppmw.

***(Supporting analysis must be attached. Do not use TCLP analytical results. Acceptable laboratory methods include 8020, 8240, 8260, 602 and 624.)***
*For a list of NAICS codes, please refer to Section 9 of the EQ Resource Guide.

## Section 10 – Fuel Blending Information

10.1) Is this waste intended for fuel blending? ☐ Yes* ☒ No
*If yes, Heat value (BTU/lb.) Chlorine (%) Water (%) Solids (%)
10.2) Is this waste intended for reclamation? ☐ Yes ☐ No (5-Gallon Sample required for all reclaim waste streams)

## Section 11 – Constituent Information

Please identify your waste constituents from these four categories: ***Underlying Hazardous Constituents (UHC's), Volatile Organic Hazardous Air Pollutants (VOHAP's), Volatile Organic Compounds (VOC's) and Toxic Release Inventory Constituents (TRI)***

| Constituent | Concentration | UHC? | Constituent | Concentration | UHC? |
|---|---|---|---|---|---|
| Arsenic | 7.3 mg/kg | ☒ Yes ☐ No | | | ☐ Yes ☐ No |
| Chromium | 95.1 mg/kg | ☒ Yes ☐ No | | | ☐ Yes ☐ No |
| | | ☐ Yes ☐ No | | | ☐ Yes ☐ No |
| | | ☐ Yes ☐ No | | | ☐ Yes ☐ No |
| | | ☐ Yes ☐ No | | | ☐ Yes ☐ No |

*Please see Section 11 of the EQ Resource Guide for a list of UHC's, VOHAP's and VOC's. For a complete list of TRI constituents, please refer to 40 CFR 372.65.*

## Section 12 – Certification

I certify that all information (including attachments) is complete and factual and is an accurate representation of the known and suspected hazards, pertaining to the waste described herein. I authorize EQ's Resource Team to add supplemental information to the waste approval file, provided I am contacted and give verbal permission. I authorize EQ's Resource Team to obtain a sample from any waste shipment for purposes of verification and confirmation. I agree that, if EQ approves the waste described herein, all such wastes that are transported, delivered, or tendered to EQ by Generator or on Generator's behalf shall be subject to, and Generator shall be bound by, the attached Standard Terms and Conditions.

Generator Signature _____ Printed Name Jeremy Flint

Company Alliant Techsystems, Inc. (RFAAP) Title Environmental Engineer Date March 6, 2009

*The generator's signature MUST appear on the EQ Waste Characterization Report. If the generator has authorized a third party to certify this document, a written notice (on generator letterhead) must accompany this submittal. Although the EQ Resource Team is authorized to make certain modifications to the information provided on this form, the addition or removal of waste codes and waste constituents must be documented by the generator.*

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## STANDARD TERMS AND CONDITIONS

The Agreement between the Customer and EQ – The Environmental Quality Company and/or its member companies (hereinafter "EQ") related to or associated with Delivered Waste, as herein defined, shall be governed by the following Standard Terms and Conditions in addition to the terms and conditions contained in any Waste Characterization Report, Customer Approval Quote Confirmation, Generator Approval Notification, Notice of Waste Approval Expiration, and/or Credit Agreement associated with such Delivered Waste.

The Customer may use its standard forms (such as purchase orders, acknowledgments of orders, and invoices) to administer its dealings under this Agreement for convenience purposes, but all provisions thereof in conflict with these terms and conditions shall be deemed stricken.

**Definitions**

The following definitions shall apply for purposes of this Agreement:

**"Acceptable Waste"** shall mean any hazardous waste, as defined under applicable State or federal law, determined by EQ as acceptable for treatment and/or disposal in accordance with this Agreement.

**"Delivered Wastes"** shall mean all wastes (i) which are transported, delivered, or tendered to EQ by the Customer; (ii) which the Customer has arranged for the transport, delivery or tender to EQ; or (iii) ) which are transported, delivered, or tendered to EQ under a Credit Agreement between the Customer and EQ.

**"Non-Conforming Wastes"** shall mean wastes that (a) are not in accordance in all material respects with the warranties, descriptions, specifications or limitations stated in the Waste Characterization Report and this Agreement; (b) have constituents or components of a type or concentration not specifically identified in the Waste Characterization Report (i) which increase the nature or extent of the hazard and risk undertaken by EQ in treating and/or disposing of the waste, or (ii) for whose treatment and/or disposal a Waste Management Facility is not designed or permitted, or (iii) which increase the cost of treatment and/or disposal of waste beyond that specified in EQ's price quote; or (c) are not properly packaged, labeled, described, or placarded, or otherwise not in compliance with United States Department of Transportation and United States Environmental Protection Agency regulations.

**Control of Operations**.

EQ shall have sole control over all aspects of the operation of any treatment and/or disposal facility of EQ receiving Delivered Wastes under this Agreement (hereinafter, "Waste Management Facility"), including, without limitation, maintaining EQ's desired volume of Acceptable Wastes being delivered to any Waste Management Facility by the Customer or any other person or entity.

**Identification of Waste**.

For each waste material to be transported, delivered, or tendered to EQ under this Agreement, the Customer shall provide, or cause to be provided, to EQ a representative sample of the waste material and a completed Waste Characterization Report containing a physical and chemical description or analysis of such waste material, which description shall conform with any and all guidelines for waste acceptance provided by EQ. On the basis of EQ's analysis of such representative sample of the waste material and such Waste Characterization Report, EQ will determine whether such wastes are Acceptable Wastes. EQ does not make any guarantee that it will handle any waste material or any particular quantity or type of waste material, and EQ reserves the right to the decline to transport, treat and/or dispose of waste material. The Customer shall promptly furnish to EQ any information regarding known, suspected or planned changes in the composition of the waste material. Further, the Customer shall promptly inform EQ of any change in the characteristic or condition of the waste material which becomes known to the Customer subsequent to the date of the Waste Characterization Report.

**Non-Conforming Wastes**.

In the event that EQ at any time discovers that any Delivered Waste is Non-Conforming Waste, EQ may reject or revoke its acceptance of the Non-Conforming Waste. The Customer shall have seven (7) days to direct an alternative lawful manner of disposition of the waste, unless it is necessary by reason of law or otherwise to move the Non-Conforming Waste prior to expiration of the seven (7) day period. If the Customer does not direct an alternative disposal, at its option, EQ may return any such Non-Conforming Wastes to the Customer, and the Customer shall pay or reimburse EQ for all costs and expenses incurred by EQ in connection with the receipt, handling, sampling, analyses, transportation and return to the Customer of such Non-Conforming Wastes. If it is impossible or impractical for EQ to return the Non-Conforming Waste to the Customer, the Customer shall reimburse EQ for all costs, of any type or nature whatsoever, incurred by EQ, solely because such Delivered Waste was Non-Conforming Waste (including, but not limited to, all costs associated with any remedial steps necessary, due to the nature of the Non-Conforming Waste, in connection with material with which the Non-Conforming Waste may have been commingled and all expenses and charges for analyzing, handling, locating, preparing for transporting, storing and disposing of any Non-Conforming Waste).

**Customer Warranty - Acceptable Wastes**.

All Delivered Wastes shall be Acceptable Wastes and shall conform in all material respects to the description and specifications contained in the Waste Characterization Report. The information set forth in the Waste Characterization Report or any manifest, placard or label associated with any Delivered Wastes, or otherwise represented by the Customer or the generator (if other than the Customer) to EQ, is and shall be true, accurate and complete as of the date of receipt of the involved waste by EQ.

**Customer Warranty - Title to Wastes**.

Either the Customer or the generator (if other than the Customer) shall hold clear title, free of any all liens, claims, encumbrances, and charges to Delivered Waste until such waste is accepted by EQ.

**Customer Warranty - Compliance with Laws**.

The Customer shall comply with all applicable federal, state and local environmental statutes, regulations, and other governmental requirements, as well as directives issued by EQ from time to time, governing the transportation, treatment and/or disposal of Acceptable Wastes, including, but not limited to, all packaging, manifesting, containerization, placarding and labeling requirements.

**Customer Warranty - Updating Information**.

If the Customer receives information that Delivered Waste or other hazardous waste described in the Waste Characterization Report, or some component of such waste, presents or may present a hazard or risk to persons, property or the environment which was not disclosed to EQ, or if the Customer or generator (if other than the Customer) has changed the process by which such waste results, the Customer shall promptly report such information to EQ in writing.

**Customer Indemnity**.

The Customer shall indemnify, defend and hold harmless EQ, and its affiliated or related companies, and all of their respective present or future officers, directors, shareholders, employees and agents from and against any and all losses, damages, liabilities, penalties, fines, forfeitures, demands, claims, causes of action, suits, costs and expenses (including, but not limited to, reasonable costs of defense, settlement, and reasonable attorneys' fees), which may be asserted against any or all of them by any person or any governmental agency, or which any or all of them may hereafter suffer, incur, be responsible for or pay out, as a result of or in connection with bodily injuries (including, but not limited to, death, sickness, disease and emotional or mental distress) to any person (including EQ's employees), damage (including, but not limited to, loss of use) to any property (public or private), or any requirements to conduct or incur expense for investigative, removal or remedial expenses in connection with contamination of or adverse effect on the environment, or any violation or alleged violation of any statues, ordinances, orders, rules or regulations of any governmental entity or agency, caused or arising out of (i) a breach of this Agreement by the Customer, (ii) the failure of any warranty of the Customer to be true, accurate and complete, or (iii) any willful or negligent act or omission of the Customer, or its employees or agents in connection with the performance of this Agreement.

**Force Majeure**

EQ shall not be liable for any failure to accept, receive, handle, treat, and/or dispose of Delivered Waste due to an act of God, fire, casualty, flood, war, strike, lockout, labor trouble, failure of public utilities, equipment failure, facility shutdown, injunction, accident, epidemic, riot, insurrection, destruction of operation or transportation facilities, the inability to procure materials, equipment, or sufficient personnel or energy in order to meet operational needs without the necessity of allocation, the failure or inability to obtain any governmental approvals or to meet Environmental Requirements (including, but not limited to voluntary or involuntary compliance with any act, exercise, assertion, or requirement of any governmental authority) which may temporarily or permanently prohibit operations of EQ, the Customer, or the Generator, or any other circumstances beyond the control of EQ which prevents or delays performance of any of its obligations under this Agreement.

**Governing Laws**

This Agreement shall in all respects be governed by and shall be construed in accordance with the laws of the State of Michigan applied to contracts executed and performed wholly within such state.

# Attachment 1
## Comparison of ProUCL and RISK2000 UCL-Based Exposure Point Concentrations Used in the SWMU 39 HHRA

| Exposure Point | Chemical of Potential Concern | Maximum Concentration (Qualifier) | ProUCL Exposure Point Concentration [1] | | | Risk 2000 Exposure Point Concentration [2] | | |
|---|---|---|---|---|---|---|---|---|
| | | | Value | Units | Statistic | Value | Units | Statistic |
| Surface Soil (0-2') | TCDD-RME | 2.07E-05 | 2.89E-05[3] | mg/kg | Approx. Gamma | 2.07E-05 | mg/kg | Max |
| | Aluminum | 37400 | 25216 | mg/kg | Student-t | 25800 | mg/kg | 95%UCL-T |
| | Arsenic | 7.26 | 4.1 | mg/kg | Student-t | 5.4 | mg/kg | 95%UCL-T |
| | Chromium | 95.1 | 45.9 | mg/kg | Approx. Gamma | 46.8 | mg/kg | 95%UCL-T |
| | Copper | 375 | **351.8** | mg/kg | 99% Chebyshev | 117.7 | mg/kg | 95%UCL-BST |
| | Iron | 52800 | 34557.9 | mg/kg | Student-t | 35207.2 | mg/kg | 95%UCL-T |
| | Lead | 16500 | 10667.5 | mg/kg | 99% Chebyshev | 12841.9 | mg/kg | 95%UCL-T |
| | Manganese | 1380 | 689.4 | mg/kg | Approx. Gamma | 811.7 | mg/kg | 95%UCL-T |
| | Thallium | 22.7 | 17.0 | mg/kg | 99% Chebyshev | 4.3 | mg/kg | 95%UCL-BST |
| | Vanadium | 92.7 | 63.2 | mg/kg | Student-t | 63.2 | mg/kg | 95%UCL-N |
| Total Soil (0-10') | TCDD-RME | 2.07E-05 | 1.36E-05 | mg/kg | Approx. Gamma | 2.07E-05 | mg/kg | Max |
| | Aluminum | 37400 | 24904.3 | mg/kg | Student-t | 25200 | mg/kg | 95%UCL-T |
| | Arsenic | 7.26 | 3.8 | mg/kg | Approx. Gamma | 4.3 | mg/kg | 95%UCL-T |
| | Chromium | 95.1 | 42.4 | mg/kg | Approx. Gamma | 42.6 | mg/kg | 95%UCL-T |
| | Copper | 375 | **146.4** | mg/kg | 95% Chebyshev | 89.3 | mg/kg | 95%UCL-BST |
| | Iron | 52800 | 33794.8 | mg/kg | Student-t | 34156.2 | mg/kg | 95%UCL-T |
| | Lead | 16500 | **7350.8** | mg/kg | 99% Chebyshev | 1710 | mg/kg | 95%UCL-BST |
| | Manganese | 1380 | 572.3 | mg/kg | Approx. Gamma | 618.6 | mg/kg | 95%UCL-T |
| | Thallium | 22.7 | **11.8** | mg/kg | 99% Chebyshev | 3.1 | mg/kg | 95%UCL-BST |
| | Vanadium | 92.7 | 63.1 | mg/kg | Student-t | 63.1 | mg/kg | 95%UCL-N |

[1] ProUCL EPC UCL Statistics: Student's-t 95% UCL (Student-t); Approximate Gamma 95% UCL (Approx. Gamma); Chebyshev 95% UCL (95% Chebyshev); Chebyshev 99% UCL (99% Chebyshev).

[2] Risk 2000 EPC UCL Statistics: Maximum Detected Value (Max); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T); 95% UCL based on bootstrap statistic (95% UCL-Bst)

[3] Calculated ProUCL EPC value exceeds maximum detected concentration (MDC). The MDC would be selected as the EPC for the risk assessment.

NOTES:

**Bold** values indicate the ProUCL estimated EPC exceeds the Risk 2000 estimated EPC.

Non-detects: 1/2 detection limit was used for all NDs.

All bootstrap calulations use 5000 iterations.

mg/kg = milligram per kilogram.

Shaw E & I Inc

Client Sample ID: 39DW01

TCLP Metals

Lot-Sample #...: G8K210281-001 Matrix.....: SOLID
Date Sampled...: 11/19/08 Date Received..: 11/21/08
Leach Date.....: 11/24/08 Leach Batch #..: P832912

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...: 8330066** | | | | | | |
| Silver | ND | 0.025 | mg/L | SW846 6010B | 11/25/08 | K3F6D1A9 |
| | | Dilution Factor: 1 | | MDL.....: 0.0050 | | |
| Arsenic | ND | 0.10 | mg/L | SW846 6010B | 11/25/08 | K3F6D1CA |
| | | Dilution Factor: 1 | | MDL.....: 0.035 | | |
| **Barium** | **0.59 J** | **0.50** | **mg/L** | **SW846 6010B** | **11/25/08** | **K3F6D1CC** |
| | | Dilution Factor: 1 | | MDL.....: 0.020 | | |
| Cadmium | ND | 0.010 | mg/L | SW846 6010B | 11/25/08 | K3F6D1CD |
| | | Dilution Factor: 1 | | MDL.....: 0.0050 | | |
| Chromium | ND | 0.025 | mg/L | SW846 6010B | 11/25/08 | K3F6D1CE |
| | | Dilution Factor: 1 | | MDL.....: 0.020 | | |
| **Lead** | **7.9** | **0.050** | **mg/L** | **SW846 6010B** | **11/25/08** | **K3F6D1CF** |
| | | Dilution Factor: 1 | | MDL.....: 0.015 | | |
| **Selenium** | **0.042 B** | **0.075** | **mg/L** | **SW846 6010B** | **11/25/08** | **K3F6D1CG** |
| | | Dilution Factor: 1 | | MDL.....: 0.035 | | |
| **Prep Batch #...: 8330109** | | | | | | |
| Mercury | ND | 0.0030 | mg/L | SW846 7470A | 11/25-11/26/08 | K3F6D1CK |
| | | Dilution Factor: 1 | | MDL.....: 0.0010 | | |

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL

Shaw E & I Inc

Client Sample ID: 39DW02

TCLP Metals

Lot-Sample #...: G8K210281-002
Date Sampled...: 11/19/08
Leach Date.....: 11/24/08
Date Received..: 11/21/08
Leach Batch #..: P832912
Matrix.....: SOLID

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| **Prep Batch #...: 8330066** | | | | | | |
| Silver | ND | 0.025<br>Dilution Factor: 1 | mg/L | SW846 6010B<br>MDL.....: 0.0050 | 11/25/08 | K3F6L1AM |
| Arsenic | ND | 0.10<br>Dilution Factor: 1 | mg/L | SW846 6010B<br>MDL.....: 0.035 | 11/25/08 | K3F6L1AN |
| **Barium** | **0.89 J** | **0.50**<br>Dilution Factor: 1 | **mg/L** | **SW846 6010B**<br>MDL.....: 0.020 | **11/25/08** | **K3F6L1AP** |
| Cadmium | ND | 0.010<br>Dilution Factor: 1 | mg/L | SW846 6010B<br>MDL.....: 0.0050 | 11/25/08 | K3F6L1AQ |
| Chromium | ND | 0.025<br>Dilution Factor: 1 | mg/L | SW846 6010B<br>MDL.....: 0.020 | 11/25/08 | K3F6L1AR |
| **Lead** | **8.4** | **0.050**<br>Dilution Factor: 1 | **mg/L** | **SW846 6010B**<br>MDL.....: 0.015 | **11/25/08** | **K3F6L1AT** |
| **Selenium** | **0.042 B** | **0.075**<br>Dilution Factor: 1 | **mg/L** | **SW846 6010B**<br>MDL.....: 0.035 | **11/25/08** | **K3F6L1AU** |
| **Prep Batch #...: 8330109** | | | | | | |
| Mercury | ND | 0.0030<br>Dilution Factor: 1 | mg/L | SW846 7470A<br>MDL.....: 0.0010 | 11/25-11/26/08 | K3F6L1AX |

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result Result is less than RL.

Shaw E & I Inc

Client Sample ID: 39DW01

General Chemistry

Lot-Sample #...: G8K210281-001 Work Order #...: K3F6D Matrix.....: SO
Date Sampled...: 11/19/08 Date Received..: 11/21/08
% Moisture.....: 13

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| pH | 4.8 | 0.10 | -- | SW846 9045C | 11/24/08 | 8329629 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |
| Cyanide, Total | ND | 0.57 | mg/kg | SW846 9012A | 11/24/08 | 8330316 |
| | | Dilution Factor: 1 | | MDL.....: 0.44 | | |
| Ignitability | ND | -- | -- | SW846 SECTION 7.1 | 11/26/08 | 8331440 |
| | | Dilution Factor: 1 | | MDL.....: | | |
| Percent Moisture | 12.8 | 0.10 | % | ASTM D 2216-90 | 11/24-11/25/08 | 8329325 |
| | | Dilution Factor: 1 | | MDL.....: 0.10 | | |
| Total Sulfide | ND | 5.7 | mg/kg | SW846 9030B/9034 | 11/26/08 | 8331523 |
| | | Dilution Factor: 1 | | MDL.....: 2.8 | | |

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

The analyte was not detected at the limit of detection

Shaw E & I Inc

Client Sample ID: 39DW02

General Chemistry

Lot-Sample #...: G8K210281-002 Work Order #...: K3F6L Matrix.....: SO
Date Sampled...: 11/19/08 Date Received..: 11/21/08
% Moisture.....: 19

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| pH | 4.5 | 0.10<br>Dilution Factor: 1 | -- | SW846 9045C<br>MDL .... .... : 0.10 | 11/24/08 | 8329629 |
| Cyanide, Total | ND | 0.62<br>Dilution Factor: 1 | mg/kg | SW846 9012A<br>MDL .....: 0.47 | 11/24/08 | 8330316 |
| Ignitability | ND | --<br>Dilution Factor: 1 | -- | SW846 SECTION 7.1<br>MDL.....: | 11/26/08 | 8331440 |
| Percent Moisture | 19.2 | 0.10<br>Dilution Factor: 1 | % | ASTM D 2216-90<br>MDL.....: 0.10 | 11/24-11/25/08 | 8329325 |
| Total Sulfide | ND | 6.2<br>Dilution Factor: 1 | mg/kg | SW846 9030B/9034<br>MDL.....: 3.0 | 11/26/08 | 8331523 |

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

The analyte was not detected at the limit of detection

Shaw E & I Inc

Client Sample ID: 39DW02

HPLC

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G8K210281-002 | **Work Order #...:** | K3F6L1AF | **Matrix.....:** | SOLID |
| **Date Sampled...:** | 11/19/08 | **Date Received..:** | 11/21/08 | | |
| **Prep Date.....:** | 11/24/08 | **Analysis Date..:** | 11/26/08 | | |
| **Prep Batch #...:** | 8329477 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 19 | **Method.....:** | SW846 8330B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 2-Amino-4,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.012 |
| 1,3-Dinitrobenzene | ND | 0.25 | mg/kg | 0.0042 |
| **2,4-Dinitrotoluene** | **0.058 J** | **0.25** | **mg/kg** | **0.0052** |
| 2,6-Dinitrotoluene | ND | 1.2 | mg/kg | 0.0072 |
| **Nitroglycerin** | **0.18 J** | **0.50** | **mg/kg** | **0.015** |
| 2-Nitrotoluene | ND | 0.25 | mg/kg | 0.013 |
| 4-Nitrotoluene | ND | 0.50 | mg/kg | 0.018 |
| Nitrobenzene | ND | 0.25 | mg/kg | 0.017 |
| 1,3,5-Trinitrobenzene | ND | 0.25 | mg/kg | 0.0099 |
| 2,4,6-Trinitrotoluene | ND | 0.25 | mg/kg | 0.019 |
| HMX | ND | 0.25 | mg/kg | 0.012 |
| RDX | ND | 0.25 | mg/kg | 0.012 |
| Tetryl | ND | 0.25 | mg/kg | 0.0099 |
| 3-Nitrotoluene | ND | 0.25 | mg/kg | 0.015 |
| 4-Amino-2,6-dinitrotoluene | ND | 0.25 | mg/kg | 0.0099 |
| PETN | ND | 0.50 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 3,4-Dinitrotoluene | 80 * | (81 - 127) |

**NOTE(S):**

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL

**Shaw E & I Inc**

**Sample ID: 39DW01**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G8K210281 - 001 | **Work Order #....:** | K3F6D2A5 | **Matrix....:** | SO |
| **Date Sampled....:** | 11/19/08 | **Date Received....:** | 11/21/08 | **Dilution Factor:** | 1 |
| **Prep Date....:** | 12/01/08 | **Analysis Date....:** | 12/05/08 | **Percent Moisture:** | 13 |
| **Prep Batch # ....:** | 8336625 | **Instrument ID....:** | 8D5 | | |
| **Initial Wgt/Vol :** | 10.3 g | **Analyst ID....:** | Susan X. Yan | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.1 | 0.61 | pg/g |
| Total TCDD | ND | | 1.1 | 0.61 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 5.7 | 1.4 | pg/g |
| Total PeCDD | ND | | 5.7 | 1.4 | pg/g |
| 1,2,3,4,7,8-HxCDD | ND | | 5.7 | 0.94 | pg/g |
| 1,2,3,6,7,8-HxCDD | ND | | 5.7 | 0.78 | pg/g |
| 1,2,3,7,8,9-HxCDD | ND | | 5.7 | 0.79 | pg/g |
| **Total HxCDD** | **7.5** | | **5.7** | **7.5** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **28** | | **5.7** | **1.5** | **pg/g** |
| **Total HpCDD** | **54** | | **5.7** | **1.5** | **pg/g** |
| **OCDD** | **2400** | **B** | **11** | **2.1** | **pg/g** |
| 2,3,7,8-TCDF | ND | | 1.1 | 0 67 | pg/g |
| Total TCDF | ND | | 1 1 | 0.67 | pg/g |
| 1,2,3,7,8-PeCDF | ND | | 5.7 | 0.63 | pg/g |
| 2,3,4,7,8-PeCDF | ND | | 5 7 | 0.64 | pg/g |
| **Total PeCDF** | **1.1** | | **5.7** | **0.64** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **1.2** | **J** | **5.7** | **0.46** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.61** | **J** | **5.7** | **0.39** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.68** | **J** | **5.7** | **0.46** | **pg/g** |
| 1,2,3,7.8,9-HxCDF | ND | | 5 7 | 0.52 | pg/g |
| **Total HxCDF** | **4.0** | | **5.7** | **0.45** | **pg/g** |
| **1,2,3,4,6,7.8-HpCDF** | **2.9** | **J** | **5.7** | **0.49** | **pg/g** |
| 1,2,3,4,7,8,9-HpCDF | ND | | 5 7 | 0.60 | pg/g |
| **Total HpCDF** | **4.4** | | **5.7** | **0.54** | **pg/g** |
| **OCDF** | **2.9** | **J** | **11** | **0.84** | **pg/g** |

Shaw E & I Inc

Sample ID: 39DW02

Trace Level Organic Compounds

SW846 8290

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G8K210281 - 002 | **Work Order #....:** | K3F6L3AG | **Matrix....:** | SO |
| **Date Sampled....:** | 11/19/08 | **Date Received....:** | 11/21/08 | **Dilution Factor:** | 2 |
| **Prep Date....:** | 12/01/08 | **Analysis Date....:** | 12/07/08 | **Percent Moisture:** | 19 |
| **Prep Batch # ....:** | 8336625 | **Instrument ID....:** | 8D5 | | |
| **Initial Wgt/Vol :** | 10.31 g | **Analyst ID....:** | Susan X. Yan | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 2.5 | 0.66 | pg/g |
| Total TCDD | ND | | 2.5 | 0.66 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 12 | 1.4 | pg/g |
| Total PeCDD | ND | | 12 | 1.4 | pg/g |
| 1,2,3,4,7,8-HxCDD | 4.4 | J | 12 | 0.93 | pg/g |
| 1,2,3,6,7,8-HxCDD | 15 | | 12 | 0.88 | pg/g |
| 1,2,3,7,8,9-HxCDD | 5.3 | J | 12 | 0.85 | pg/g |
| Total HxCDD | 70 | | 12 | 0.89 | pg/g |
| 1,2,3,4,6,7,8-HpCDD | 390 | | 12 | 1.4 | pg/g |
| Total HpCDD | 630 | | 12 | 1.4 | pg/g |
| OCDD | 6000 | B | 25 | 2.6 | pg/g |
| 2,3,7,8-TCDF | 34 | CON | 1.2 | 0.41 | pg/g |
| Total TCDF | 110 | | 2.5 | 0.42 | pg/g |
| 1,2,3,7,8-PeCDF | 8.0 | J | 12 | 0.80 | pg/g |
| 2,3,4,7,8-PeCDF | 17 | | 12 | 0.80 | pg/g |
| Total PeCDF | 74 | | 12 | 0.80 | pg/g |
| 1,2,3,4,7,8-HxCDF | 21 | | 12 | 0.63 | pg/g |
| 1,2,3,6,7,8-HxCDF | 6.6 | J | 12 | 0.59 | pg/g |
| 2,3,4,6,7,8-HxCDF | 2.8 | J | 12 | 0.67 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 12 | 0.80 | pg/g |
| Total HxCDF | 120 | | 12 | 0.67 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | 82 | | 12 | 1.1 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | 9.2 | J | 12 | 1.2 | pg/g |
| Total HpCDF | 270 | | 12 | 1.1 | pg/g |
| OCDF | 270 | | 25 | 0.98 | pg/g |

# Appendix D

## Hazardous Waste Truck Log

## RADFORD ARSENAL

**Truck Log**
**Shaw Project No. 123461**
**SWMU 39**

| Ship Date | Truck/Trailer Number | Time In | Time Out | Manifest No. | Est. Tare Wt. | Net Wt. | Gross Wt. | Actual Tons |
|---|---|---|---|---|---|---|---|---|
| 04/15/09 | 6191/38823 | 0800 | 0850 | 006184868 JJK | 28,500 | 52,020 | 80,520 | 26.01 |
| 04/15/09 | 7177/3802 | 0800 | 0850 | 006184869 JJK | 28,000 | 50,760 | 78,760 | 25.38 |
| 04/15/09 | 9165/38809 | 0850 | 0950 | 006184870 JJK | 29,000 | 50,620 | 79,620 | 25.31 |
| 04/15/09 | 7183/38816 | 0850 | 0950 | 006184871 JJK | 28,000 | 50,200 | 78,200 | 25.10 |
| 04/15/09 | 7175/38803 | 1000 | 1100 | 006184872 JJK | 28,000 | 52,620 | 80,620 | 26.31 |
| 04/15/09 | 7162/38818 | 1000 | 1100 | 006184855 JJK | 28,000 | 52,260 | 80,260 | 26.13 |
| 04/16/09 | 9168/38812 | 0745 | 0845 | 006184846 JJK | 29,400 | 51,580 | 80,980 | 25.79 |
| 04/16/09 | 318/38807 | 0745 | 0845 | 006184847 JJK | 30,500 | 45,020 | 75,520 | 22.51 |
| 04/16/09 | 7164/38628 | 0850 | 0950 | 006184848 JJK | 28,200 | 51,060 | 79,260 | 25.53 |
| 04/16/09 | 7151/38815 | 0850 | 0950 | 006184850 JJK | 28,600 | 51,680 | 80,280 | 25.84 |
| 04/16/09 | 9163/38804 | 1000 | 1045 | 006184851 JJK | 29,200 | 49,260 | 78,460 | 24.63 |
| 04/16/09 | 9167/38811 | 1000 | 1045 | 006184852 JJK | 29,400 | 49,520 | 78,920 | 24.76 |
| 04/16/09 | 7170/38800 | 1045 | 1130 | 006184853 JJK | 28,500 | 51,640 | 80,140 | 25.82 |
| 04/16/09 | 7153/38621 | 1045 | 1130 | 006184854 JJK | 28,400 | 51,200 | 79,600 | 25.60 |
| 04/16/09 | 7176/3806 | 1145 | 1215 | 006184856 JJK | 28,000 | 49,240 | 77,240 | 24.62 |
| 04/16/09 | 7183/38816 | 1420 | 1450 | 006213660 JJK | 28,000 | 51,760 | 79,760 | 25.88 |
| 04/16/09 | 9165/38809 | 1340 | 1415 | 006213659 JJK | 29,000 | 51,520 | 80,520 | 25.76 |
| 04/17/09 | 6191/38823 | 0750 | 0840 | 006213655 JJK | 28,500 | 50,480 | 78,980 | 25.24 |
| 04/17/09 | 7177/3802 | 0750 | 0840 | 006213656 JJK | 28,000 | 50,560 | 78,560 | 25.28 |
| 04/17/09 | 7175/38803 | 0850 | 0930 | 006213657 JJK | 28,300 | 50,280 | 78,580 | 25.14 |
| 04/17/09 | 7162/38818 | 0850 | 0930 | 006213658 JJK | 28,000 | 51,300 | 79,300 | 25.65 |
| 04/20/09 | 9167/38811 | 0800 | 0845 | 006213661 JJK | 29,300 | 49,500 | 78,800 | 24.75 |
| 04/20/09 | 9163/38804 | 0800 | 0845 | 006213662 JJK | 29,400 | 49,780 | 79,180 | 24.89 |
| 04/20/09 | 7164/38628 | 0845 | 0945 | 006213663 JJK | 28,200 | 50,640 | 78,840 | 25.32 |
| 04/20/09 | 7170/38800 | 0845 | 0945 | 006213664 JJK | 28,400 | 51,860 | 80,260 | 25.93 |
| 04/20/09 | 7151/38815 | 0945 | 1020 | 006213665 JJK | 28,600 | 52,140 | 80,740 | 26.07 |
| 04/20/09 | 7176/3806 | 0945 | 1020 | 006213666 JJK | 28,000 | 50,500 | 78,500 | 25.25 |
| 04/20/09 | 7153/38621 | 1030 | 1115 | 006213667 JJK | 28,500 | 51,580 | 80,080 | 25.79 |
| 04/20/09 | 9168/38812 | 1030 | 1115 | 006213668 JJK | 29,400 | 51,300 | 80,700 | 25.65 |
| 04/20/09 | 318/38807 | 1115 | 1145 | 006213669 JJK | 30,500 | 47,480 | 77,980 | 23.74 |
| 04/20/09 | 9165/38809 | 1115 | 1145 | 006184911 JJK | 29,000 | 50,740 | 79,740 | 25.37 |
| 04/20/09 | 7183/38816 | 1145 | 1230 | 006184866 JJK | 28,000 | 51,140 | 79,140 | 25.57 |
| 04/20/09 | 7175/38803 | 1145 | 1230 | 006184867 JJK | 28,000 | 53,980 | 81,980 | 26.99 |
| 04/20/09 | 7162/38818 | 1230 | 1315 | 006184873 JJK | 28,000 | 51,660 | 79,660 | 25.83 |
| 04/20/09 | 7177/3802 | 1230 | 1315 | 006184874 JJK | 28,000 | 48,440 | 76,440 | 24.22 |
| 04/20/09 | 6191/38823 | 1315 | 1340 | 006184875 JJK | 28,500 | 51,480 | 79,980 | 25.74 |
| 04/22/09 | 9167/38811 | 0720 | 0800 | 006184912 JJK | 29,300 | 49,360 | 78,660 | 24.68 |
| 04/22/09 | 9163/38804 | 0720 | 0800 | 006184913 JJK | 29,300 | 49,980 | 79,280 | 24.99 |
| 04/22/09 | 7164/38628 | 0800 | 0845 | 006184914 JJK | 28,200 | 51,100 | 79,300 | 25.55 |
| 04/22/09 | 7170/38800 | 0800 | 0845 | 006184915 JJK | 28,400 | 51,540 | 79,940 | 25.77 |
| 04/22/09 | 9168/38812 | 0845 | 0930 | 006184916 JJK | 29,400 | 48,160 | 77,560 | 24.08 |
| 04/22/09 | 7176/3806 | 0845 | 0930 | 006184917 JJK | 28,000 | 48,380 | 76,380 | 24.19 |
| 04/22/09 | 9165/38809 | 0930 | 1000 | 006184918 JJK | 29,000 | 50,940 | 79,940 | 25.47 |
| 04/22/09 | 7183/38816 | 0930 | 1000 | 006184919 JJK | 28,000 | 49,780 | 77,780 | 24.89 |
| 04/22/09 | 7175/38803 | 1005 | 1045 | 006184920 JJK | 28,000 | 54,200 | 82,200 | 27.10 |
| 04/22/09 | 7162/38818 | 1005 | 1045 | 006184921 JJK | 28,000 | 52,000 | 80,000 | 26.00 |
| 04/22/09 | 6191/38823 | 1045 | 1125 | 006184922 JJK | 28,500 | 50,140 | 78,640 | 25.07 |
| 04/22/09 | 318/38807 | 1045 | 1125 | 006184923 JJK | 30,500 | 46,720 | 77,220 | 23.36 |
| 04/22/09 | 7177/3802 | 1125 | 1205 | 006184924 JJK | 28,000 | 49,900 | 77,900 | 24.95 |
| 04/22/09 | 7153/38621 | 1125 | 1205 | 006184857 JJK | 28,500 | 49,500 | 78,000 | 24.75 |
| 04/22/09 | 7151/38815 | 1205 | 1235 | 006184858 JJK | 28,600 | 51,160 | 79,760 | 25.58 |
| 04/24/09 | 318/38807 | 0720 | 0800 | 006184876 JJK | 30,500 | 46,900 | 77,400 | 23.45 |
| 04/24/09 | 7175/38803 | 0720 | 0800 | 006184859 JJK | 28,000 | 53,160 | 81,160 | 26.58 |
| 04/24/09 | 9167/38811 | 0800 | 0835 | 006184860 JJK | 29,400 | 49,360 | 78,760 | 24.68 |
| 04/24/09 | 9163/38804 | 0800 | 0835 | 006184861 JJK | 29,300 | 48,960 | 78,260 | 24.48 |
| 04/24/09 | 9165/38809 | 0835 | 0915 | 006184862 JJK | 29,000 | 50,420 | 79,420 | 25.21 |
| 04/24/09 | 7183/38816 | 0835 | 0915 | 006184863 JJK | 28,000 | 50,340 | 78,340 | 25.17 |
| 04/24/09 | 7164/38628 | 0920 | 1000 | 006184864 JJK | 28,200 | 51,540 | 79,740 | 25.77 |

## RADFORD ARSENAL

**Truck Log**
**Shaw Project No. 123461**
**SWMU 39**

| Ship Date | Truck/Trailer Number | Time In | Time Out | Manifest No. | Est. Tare Wt. | Net Wt. | Gross Wt. | Actual Tons |
|---|---|---|---|---|---|---|---|---|
| 04/24/09 | 7170/38800 | 0920 | 1000 | 006184865 JJK | 28,400 | 50,200 | 78,600 | 25.10 |
| 04/24/09 | 6191/38823 | 1005 | 1040 | 006184925 JJK | 28,500 | 51,040 | 79,540 | 25.52 |
| 04/24/09 | 7177/3802 | 1005 | 1040 | 006184926 JJK | 28,000 | 50,380 | 78,380 | 25.19 |
| 04/24/09 | 7162/38818 | 1040 | 1120 | 006184927 JJK | 28,000 | 50,940 | 78,940 | 25.47 |
| 04/24/09 | 7153/38621 | 1040 | 1120 | 006184928 JJK | 28,500 | 50,480 | 78,980 | 25.24 |
| 04/24/09 | 7151/38815 | 1120 | 1150 | 006184929 JJK | 28,600 | 50,740 | 79,340 | 25.37 |
| 04/24/09 | 7176/3806 | 1330 | 1400 | 006184930 JJK | 28,000 | 51,080 | 79,080 | 25.54 |
| 04/27/09 | 318/38807 | 0735 | 0815 | 006184932 JJK | 30,500 | 47,820 | 78,320 | 23.91 |
| 04/27/09 | 9165/38809 | 0735 | 0815 | 006184933 JJK | 29,000 | 49,940 | 78,940 | 24.97 |
| 04/27/09 | 9163/38804 | 0815 | 0850 | 006184934 JJK | 29,300 | 50,600 | 79,900 | 25.30 |
| 04/27/09 | 9167/38811 | 0815 | 0850 | 006184935 JJK | 29,300 | 49,760 | 79,060 | 24.88 |
| 04/27/09 | 7175/38803 | 0850 | 0930 | 006184940 JJK | 28,300 | 51,400 | 79,700 | 25.70 |
| 04/27/09 | 6191/38823 | 0850 | 0930 | 006184941 JJK | 28,500 | 51,320 | 79,820 | 25.66 |
| 04/27/09 | 7177/3802 | 0930 | 1000 | 006184942 JJK | 28,000 | 50,420 | 78,420 | 25.21 |
| 04/27/09 | 7164/38628 | 0930 | 1000 | 006184943 JJK | 28,200 | 51,120 | 79,320 | 25.56 |
| 04/27/09 | 7170/38800 | 1005 | 1040 | 006184944 JJK | 28,400 | 52,300 | 80,700 | 26.15 |
| 04/27/09 | 7162/38818 | 1005 | 1040 | 006184945 JJK | 28,000 | 52,120 | 80,120 | 26.06 |
| 04/27/09 | 7153/38621 | 1045 | 1130 | 006184946 JJK | 28,500 | 49,620 | 78,120 | 24.81 |
| 04/27/09 | 7183/38816 | 1045 | 1130 | 006184947 JJK | 28,000 | 51,480 | 79,480 | 25.74 |
| 04/28/09 | 318/38807 | 1030 | 1100 | 006184931 JJK | 30,500 | 48,240 | 78,740 | 24.12 |
| 04/28/09 | 7151/38815 | 1230 | 1300 | 006184948 JJK | 28,600 | 51,280 | 79,880 | 25.64 |
| 04/28/09 | 9165/38809 | 1315 | 1345 | 006184950 JJK | 29,000 | 50,300 | 79,300 | 25.15 |
| 04/29/09 | 9167/38811 | 0745 | 0815 | 006184951 JJK | 29,300 | 49,220 | 78,520 | 24.61 |
| 04/29/09 | 9163/38804 | 0745 | 0815 | 006184952 JJK | 29,300 | 50,760 | 80,060 | 25.38 |
| 04/29/09 | 7175/38803 | 0815 | 0850 | 006184953 JJK | 28,300 | 51,280 | 79,580 | 25.64 |
| 04/29/09 | 7177/3802 | 0815 | 0850 | 006184954 JJK | 28,000 | 51,460 | 79,460 | 25.73 |
| 04/29/09 | 7183/38816 | 0850 | 0930 | 006184955 JJK | 28,000 | 49,640 | 77,640 | 24.82 |
| 04/29/09 | 7164/38628 | 0850 | 0930 | 006184956 JJK | 28,200 | 50,300 | 78,500 | 25.15 |
| 04/29/09 | 7170/38800 | 0930 | 1020 | 006184957 JJK | 28,400 | 49,120 | 77,520 | 24.56 |
| 04/29/09 | 7153/38621 | 0930 | 1020 | 006184958 JJK | 28,500 | 52,580 | 81,080 | 26.29 |
| 04/29/09 | 7162/38818 | 1020 | 1100 | 006184959 JJK | 28,000 | 51,260 | 79,260 | 25.63 |
| 04/29/09 | 917/3812 | 1020 | 1100 | 006184960 JJK | 30,500 | 49,580 | 80,080 | 24.79 |
| 04/29/09 | 680/38801 | 1130 | 1215 | 006184961 JJK | 30,000 | 49,400 | 79,400 | 24.70 |
| 05/11/09 | 502/3820 | 0745 | 0845 | 006184967 JJK | 30,600 | 49,600 | 80,200 | 24.80 |
| 05/11/09 | 504/38629 | 0745 | 0845 | 006184968 JJK | 31,000 | 48,720 | 79,720 | 24.36 |
| 05/11/09 | 627/222 | 0845 | 0920 | 006184969 JJK | 30,000 | 50,380 | 80,380 | 25.19 |
| 05/11/09 | 968/38805 | 0845 | 0920 | 006184970 JJK | 30,000 | 51,080 | 81,080 | 25.54 |
| 05/11/09 | 680/38801 | 0920 | 0955 | 006184971 JJK | 30,000 | 49,300 | 79,300 | 24.65 |
| 05/11/09 | 678/38813 | 0920 | 0955 | 006184972 JJK | 30,000 | 48,460 | 78,460 | 24.23 |
| 05/11/09 | 690/38802 | 0955 | 1035 | 006184973 JJK | 30,000 | 49,160 | 79,160 | 24.58 |
| 05/11/09 | 318/38807 | 0955 | 1035 | 006184974 JJK | 30,500 | 48,220 | 78,720 | 24.11 |
| 05/11/09 | 9167/38811 | 1035 | 1115 | 006184975 JJK | 29,300 | 49,620 | 78,920 | 24.81 |
| 05/11/09 | 7164/38628 | 1035 | 1115 | 006184976 JJK | 28,200 | 50,700 | 78,900 | 25.35 |
| 05/11/09 | 7177/3802 | 1115 | 1145 | 006184977 JJK | 28,000 | 50,340 | 78,340 | 25.17 |
| 05/11/09 | 9163/38804 | 1115 | 1145 | 006184979JJK | 29,300 | 48,940 | 78,240 | 24.47 |
| 05/11/09 | 556/3803 | 1145 | 1220 | 006184978 JJK | 30,400 | 49,900 | 80,300 | 24.95 |
| 05/11/09 | 917/3812 | 1145 | 1220 | 006184980 JJK | 30,500 | 49,300 | 79,800 | 24.65 |
| 05/11/09 | 7162/38818 | 1220 | 1245 | 006184981 JJK | 28,000 | 51,220 | 79,220 | 25.61 |
| 05/13/09 | 7183/38816 | 0745 | 0830 | 006184962 JJK | 28,000 | 49,940 | 77,940 | 24.97 |
| 05/13/09 | 318/38807 | 0745 | 0830 | 006184982 JJK | 30,500 | 49,300 | 79,800 | 24.65 |
| 05/13/09 | 680/38801 | 0830 | 0900 | 006184983 JJK | 30,000 | 50,260 | 80,260 | 25.13 |
| 05/13/09 | 678/38813 | 0830 | 0900 | 006184984 JJK | 30,000 | 48,020 | 78,020 | 24.01 |
| 05/13/09 | 690/38802 | 0900 | 0945 | 006184985 JJK | 30,000 | 50,400 | 80,400 | 25.20 |
| 05/13/09 | 502/3820 | 0900 | 0945 | 006184986 JJK | 30,500 | 49,780 | 80,280 | 24.89 |
| 05/13/09 | 504/38629 | 0945 | 1015 | 006184987 JJK | 31,000 | 48,980 | 79,980 | 24.49 |
| 05/13/09 | 968/38805 | 0945 | 1015 | 006184988 JJK | 29,500 | 51,480 | 80,980 | 25.74 |
| 05/13/09 | 627/222 | 1015 | 1050 | 006184989 JJK | 30,000 | 48,620 | 78,620 | 24.31 |

## RADFORD ARSENAL

**Truck Log**
**Shaw Project No. 123461**
**SWMU 39**

| Ship Date | Truck/Trailer Number | Time In | Time Out | Manifest No. | Est. Tare Wt. | Net Wt. | Gross Wt. | Actual Tons |
|---|---|---|---|---|---|---|---|---|
| 05/13/09 | 9167/38811 | 1015 | 1050 | 006184990 JJK | 29,300 | 50,780 | 80,080 | 25.39 |
| 05/13/09 | 7164/38628 | 1050 | 1120 | 006184991 JJK | 28,200 | 50,500 | 78,700 | 25.25 |
| 05/13/09 | 7177/3802 | 1050 | 1120 | 006184992 JJK | 28,000 | 51,780 | 79,780 | 25.89 |
| 05/13/09 | 7162/38818 | 1125 | 1155 | 006184993 JJK | 28,000 | 51,040 | 79,040 | 25.52 |
| 05/13/09 | 9163/38804 | 1125 | 1155 | 006184994 JJK | 29,300 | 51,200 | 80,500 | 25.60 |
| 05/13/09 | 556/3803 | 1155 | 1230 | 006184995 JJK | 30,400 | 50,200 | 80,600 | 25.10 |
| 05/13/09 | 917/3812 | 1155 | 1230 | 006184996 JJK | 30,500 | 49,220 | 79,720 | 24.61 |
| 05/15/09 | 318/38807 | 0800 | 0830 | 006184997 JJK | 30,500 | 47,980 | 78,480 | 23.99 |
| 05/15/09 | 627/222 | 0800 | 0830 | 006184998 JJK | 30,000 | 49,520 | 79,520 | 24.76 |
| 05/15/09 | 968/38805 | 0830 | 0900 | 006184999 JJK | 29,500 | 51,560 | 81,060 | 25.78 |
| 05/15/09 | 678/38813 | 0830 | 0900 | 006185000JJK | 30,000 | 50,080 | 80,080 | 25.04 |
| 05/15/09 | 680/38801 | 0900 | 0930 | 004686162 JJK | 30,000 | 49,980 | 79,980 | 24.99 |
| 05/15/09 | 690/38802 | 0900 | 0930 | 004686163 JJK | 30,000 | 51,340 | 81,340 | 25.67 |
| 05/15/09 | 7183/38816 | 0930 | 1000 | 004686164 JJK | 28,000 | 50,820 | 78,820 | 25.41 |
| 05/15/09 | 502/3820 | 0930 | 1000 | 004686165 JJK | 30,000 | 49,460 | 79,460 | 24.73 |
| 05/15/09 | 504/38629 | 1010 | 1040 | 004686166 JJK | 31,000 | 49,660 | 80,660 | 24.83 |
| 05/15/09 | 9167/38811 | 1010 | 1040 | 004686167 JJK | 29,300 | 49,920 | 79,220 | 24.96 |
| 05/15/09 | 7177/3802 | 1040 | 1110 | 004686168 JJK | 28,000 | 49,940 | 77,940 | 24.97 |
| 05/15/09 | 9163/38804 | 1040 | 1110 | 004686169 JJK | 29,300 | 50,740 | 80,040 | 25.37 |
| 05/15/09 | 556/3803 | 1110 | 1145 | 004686170 JJK | 30,400 | 48,140 | 78,540 | 24.07 |
| 05/15/09 | 917/3812 | 1110 | 1145 | 004686323 JJK | 30,500 | 48,500 | 79,000 | 24.25 |
| 05/15/09 | 7164/38628 | 1145 | 1215 | 004686188 JJK | 28,200 | 51,880 | 80,080 | 25.94 |
| 05/15/09 | 7162/38818 | 1145 | 1215 | 004686189 JJK | 28,000 | 50,960 | 78,960 | 25.48 |
| 05/18/09 | 318/38807 | 0815 | 0845 | 004686324 JJK | 30,500 | 48,040 | 78,540 | 24.02 |
| 05/18/09 | 9166/38810 | 0815 | 0845 | 004686325 JJK | 28,000 | 47,540 | 75,540 | 23.77 |
| 05/18/09 | 7183/38816 | 0845 | 0915 | 004686326 JJK | 28,000 | 51,240 | 79,240 | 25.62 |
| 05/18/09 | 800/38819 | 0845 | 0915 | 004686327 JJK | 28,800 | 52,120 | 80,920 | 26.06 |
| 05/18/09 | 794/38624 | 0915 | 1000 | 004686328 JJK | 31,000 | 48,760 | 79,760 | 24.38 |
| 05/18/09 | 7175/38803 | 0915 | 1000 | 004686329 JJK | 28,300 | 49,280 | 77,580 | 24.64 |
| 05/18/09 | 9165/38809 | 1000 | 1045 | 004686330 JJK | 29,000 | 50,380 | 79,380 | 25.19 |
| 05/18/09 | 7153/38621 | 1000 | 1045 | 004686331 JJK | 28,500 | 51,140 | 79,640 | 25.57 |
| 05/18/09 | 9168/38812 | 1045 | 1115 | 004686332 JJK | 29,400 | 50,240 | 79,640 | 25.12 |
| 05/18/09 | 7170/38800 | 1045 | 1115 | 004686333 JJK | 28,000 | 52,720 | 80,720 | 26.36 |
| 05/18/09 | 7151/38815 | 1130 | 1200 | 004686187 JJK | 28,600 | 49,940 | 78,540 | 24.97 |
| 05/19/09 | 9167/38811 | 0815 | 0900 | 006184963 JJK | 29,300 | 49,740 | 79,040 | 24.87 |
| 05/19/09 | 7177/3802 | 0815 | 0900 | 006184964 JJK | 28,000 | 51,100 | 79,100 | 25.55 |
| 05/19/09 | 9163/38804 | 0900 | 0945 | 006184965 JJK | 29,300 | 50,820 | 80,120 | 25.41 |
| 05/19/09 | 7164/38628 | 0900 | 0945 | 006184966 JJK | 28,200 | 51,320 | 79,520 | 25.66 |
| 05/19/09 | 7162/38818 | 0945 | 1015 | 004686190 JJK | 28,000 | 52,060 | 80,060 | 26.03 |
| 05/19/09 | 318/38807 | 1200 | 1230 | 004686334 JJK | 30,500 | 47,840 | 78,340 | 23.92 |
| 05/19/09 | 800/38819 | 1200 | 1230 | 004686335 JJK | 28,800 | 52,080 | 80,880 | 26.04 |
| 05/19/09 | 7175/38803 | 1400 | 1430 | 004686336 JJK | 28,300 | 52,320 | 80,620 | 26.16 |
| 05/20/09 | 7183/38816 | 0800 | 0845 | 004686337 JJK | 28,000 | 51,500 | 79,500 | 25.75 |
| 05/20/09 | 9168/38812 | 0800 | 0845 | 006189030 JJK | 29,400 | 49,140 | 78,540 | 24.57 |
| 05/20/09 | 7170/38800 | 0945 | 1015 | 006189031 JJK | 28,000 | 52,140 | 80,140 | 26.07 |
| 05/20/09 | 7151/38815 | 0945 | 1015 | 006189032 JJK | 28,600 | 50,740 | 79,340 | 25.37 |
| 05/20/09 | 7177/3802 | 1445 | 1520 | 006189033 JJK | 28,000 | 50,900 | 78,900 | 25.45 |
| 05/20/09 | 9163/38804 | 1445 | 1520 | 006189034 JJK | 29,300 | 51,440 | 80,740 | 25.72 |
| 05/21/09 | 7164/38628 | 0745 | 0815 | 006189035 JJK | 28,200 | 52,860 | 81,060 | 26.43 |
| **164** | | | | | | | | **4,130.92** |

# Appendix E

## QC Reports

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Wednesday, March 25, 2009**
**Thursday, March 26, 2009**

**Weather:**
Showers and heavy rains both days cancelled work at SWMU 39

**Description of Work:**
Crew on site at 0700 checked SWMU 51 and worked on equipment for SWMU 39, no other work took place either day due to weather 3/26/09 received skid steer with grappler bucket from Hertz equipment company, drove into site and left outside SWMU 39.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 80 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 3,975,100 | 1,987.55 | 24.84 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Apex Environmental | | | | |
| USACE | A. Montouth | | | |
| | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Skid Steer | 03/26/09 | Hertz | |
| | | | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Friday, March 27, 2009**

**Weather:**
Cloudy, Windy and Cool today (30 - 40 degrees)

**Description of Work:**
Crew on site at 0700 checked SWMU 51 for any damage from heavy rains over past 2 days and found site in good condition
On site at SWMU 39 at 0730 reviewed tailgate and continued on clearing and grubbing operations, no problems and made very good progr
Ferguson Supply delivered geotextile to use on loading area, Cat delivered 024 rubber tired loader and 12" chipper
Began stripping trees branches and chipping this afternoon

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 80 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,975,100 | **1,987.55** | **24.84** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Shaw E & I | | | | |
| USACE | A. Montouth | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Skid Steer | 03/26/09 | Hertz | |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | |
| | | | |

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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Monday, March 30, 2009**

**Weather:**
Clearing, Windy and Cool today (38 - 52 degrees)

**Description of Work:**
Crew on site at 0700 reviewed tailgate and were checked in at Gate 10, mobilized two additional personnel to assist in clearing and grubbin
Brought new personnel to visitors center and had both given photo badges today, reviewed H&S and had them join crew at SWMU 39.
Continued with the operations of dragging trees to southern end of SWMU 39 and stripping branches, chipping them and spreading chips th
Also began cutting trunks into eight foot lenghts and spreading out in same areas as per direction from the Army.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Shaw E & I | Rich Trahan | Raddy Lacson | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Skid Steer | 03/26/09 | Hertz | |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Tuesday, March 31, 2009**

**Weather:**
Sunny and Warm, no wind today, temperatures ranged from 38 - 55 degrees

**Description of Work:**
Crew on site at 0700 reviewed tailgate and were checked in at Gate 10, checked with Control Room and entered SWMU 39 at 0700 hours
Incinerator down with mechanical problem has been down since last Thursday but we weren't informed until Monday evening,
Shaw will take advantage of incinerator and work longer today.
Continued with the clearing and grubbing operations today, cutting, chipping and disposal of chips and trunks per instruction.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Shaw E & I | Rich Trahan | Raddy Lacson | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | |
| | | | |

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Wednesday, April 01, 2009**

**Weather:**
Cloudy and rain showers all day (temp-54-60 degrees)

**Description of Work:**
Crew on site at 0700 reviewed tailgate and were checked in at Gate 10, checked with Control Room and entered SWMU 39 at 0700 hours
Continued with the clearing and grubbing operations today, cutting, chipping and disposal of chips and trunks per instruction.
Heavy rains began afternoon and sent crew home early, unsafe working under the conditions this afternnon.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Shaw E & I | Rich Trahan | Raddy Lacson | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | |
| JD 200 Excavator | 04/01/09 | Hertz | |
| | | | |
| | | | |

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Thursday, April 02, 2009**

**Weather:**
Cloudy and rain showers all day (temp-48 - 52 degrees)

**Description of Work:**
Crew on site at 0700 reviewed tailgate and were checked in at Gate 10, checked with Control Room and entered SWMU 39 at 0700 hours
Continued with the clearing and grubbing operations today, cutting, chipping and disposal of chips and trunks per instruction.
Chipper down with problem today will attempt to repair this afternoon, continued cutting and hauling trees to rear of pond areas for processing.
Moved chipper out of SWMU 39 to gate 10 area for repairs on Friday.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Shaw E & I | Rich Trahan | Raddy Lacson | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | |
| JD 200 Excavator | 04/01/09 | Hertz | |
| | | | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Friday, April 03, 2009**

**Weather:**
Rain off and on all day today

**Description of Work:**
Made call yesterday to not work today and let incinerator run all day
Brought in part of the crew to work on repairing chipper outside gate 10, chipper fixed and running today at noon, will move inside gate 10 a the site on Monday, sent crew out half day.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Shaw E & I | Rich Trahan | Raddy Lacson | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | |
| JD 200 Excavator | 04/01/09 | Hertz | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Monday, April 06, 2009**

**Weather:**
Parly Cloudy/Showers (temp in the 50's)

**Description of Work:**
Completed with tree cutting and chipping operations at SWMU 39, cleaned chipper and skid steer and moved both to gate 10 for demobiliza
Called of rent both the chipper from Carter Cat and the skid steer from Hertz.
Moved loader to SWMU 51 and began cleaning up site and preparing to backfill lower 10 feet of excavation with available material (segrega

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Shaw E & I | Rich Trahan | Raddy Lacson | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Tuesday, April 07, 2009**

**Weather:**
Cold/Snow Showers (temp - 38 degrees)

**Description of Work:**
Pulled samples from SWMU 51 (10 samples taken) above the 15 feet mark and sent to TestAmerica for analysis
XRF up and running at SWMU 39, pulled 5 samples from area we want to use to load out trucks to determine where clean starts.
Starting to excavate in North Settling Pond (NSP) northeast corner to determine depth of contamination.
JD 200 excavator went down at approximately 2:00 pm today.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 0 | **0.00** | **#DIV/0!** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Shaw E & I | Rich Trahan | Raddy Lacson | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
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| | | | |

**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Wednesday, April 08, 2009**

**Weather:**
Clear and Cold (temp - 38 to 45 degrees)

**Description of Work:**
Hertz mechanic on site this morning, machine has major problem and needs to be changed out with another excavator, will happen tomorrow. Switched gears and began removing all the fencing and fence posts around the 2 ponds, every pole has at least a 1' 2' concrete base to it I XRF crew moved to FLFA to determine the extent of the contamination at the site.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Stephen Banks | Chet Brinser | Greg Griswold |
| Shaw E & I | Rich Trahan | Raddy Lacson | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Thursday, April 09, 2009**

**Weather:**
Sunny/Clear today (temp. 40-60 degrees)

**Description of Work:**
Partial crew onsite today, sent most home early for Easter weekend and rotation home
Hertz on site at 0930 to switch out machines, new JD 200 seems to be in better condition then the first machine brought to the site.
Began excavating on the NSP in the northeast corner working down to the south east corner, sample grid set up every 25 X 25 feet area an
Samples being taken are all coming up clean after approximately a 1-1.5' cut out of the bottom of the pond.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | | Chet Brinser | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Friday, April 10, 2009**

**Weather:**
N/a

**Description of Work:**

NO WORK TODAY- Good Friday is a Shaw Company Holiday.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | | Chet Brinser | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Monday, April 13, 2009**

**Weather:**
Cloudy/Cool (temp: 40-50 degrees)

**Description of Work:**
Crew onsite at 0700, tailgate held and equipment inspected, checked out SWMU 51 after holiday weekend, all secure there.
Continued to excavate NSP, consolidate material at northeast corner for loadout and sample bottom and sidewalls as areas are complete.
All samples to date have been well below the clean up levels established for the site.
First round of trucks are scheduled to begin 0800 on Wednesday April 15th, 5 trucks on the schedule

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| | | | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Tuesday, April 14, 2009**

**Weather:**
Cloudy/Cool (temp: 40-50 degrees)

**Description of Work:**
Crew onsite at 0700, tailgate held and equipment inspected, incinerator down so we entered early.
Construction of loadout area being completed today, using geotextile and crushed stone to make loadout are and platform for Shaw excava
Also completed approximately 75% of the NSP and moved into the South Settling Pond (SSP) to begin excavating in the southwest corner a
Received 148.57 loads of stone to build pad and loadout area, also continuing with the XRF of samples as excavation moves along, all sam

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Approval No. | Tare | Net (est.) |
|---|---|---|---|---|---|---|
| No Trucks | | | | | | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 0 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 0 | 0.00 | #DIV/0! |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
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**Gross (est.)**

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Wednesday, April 15, 2009**

**Weather:**
Cloudy/Cold/Windy (40-45 degrees)

**Description of Work:**
Crew arrived onsite at 0700, trucks already at Gate 10, held tailgate safety meeting and began checking in trucks.
Incinerator down early and Shaw escorted first 2 trucks into SWMU 39 at approximately 0745.
5 trucks were ordered for today but a sixth showed up early so we loaded it today, 9 trucks scheduled for tomorrow
Upon completion of loadout continued excavating of SSP and transfering material into NSP. Continued XRF of samples with good results o
NSP - about 75% completed, SSP 40% completed all cuts have been between 1-1.5 feet in depth.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 6191/38823 | 0800 | 0850 | 006184868 JJK | 28,500 | 51,000 | 79,500 |
| 7177/3802 | 0800 | 0850 | 006184869 JJK | 28,000 | 51,000 | 79,000 |
| 9165/38807 | 0850 | 0950 | 006184870 JJK | 29,000 | 50,000 | 79,000 |
| 7183/38816 | 0850 | 0950 | 006184871 JJK | 28,000 | 50,000 | 78,000 |
| 7175/38803 | 1000 | 1100 | 006184872 JJK | 28,000 | 51,000 | 79,000 |
| 7162/38818 | 1000 | 1100 | 006184855 JJK | 28,000 | 51,900 | 79,900 |
| | | | | | 304,900 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 6 | | |
| Estimated pounds shipped: today | 304,900 | | |
| Trucks loaded: to date | 6 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 304,900 | 152.45 | 25.41 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | |
| | | | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Thursday, April 16, 2009**

**Weather:**
Partly Cloudy/Warming (50-55 degrees)

**Description of Work:**
Crew arrived onsite at 0700, trucks already at Gate 10, held tailgate safety meeting and began checking in trucks.
9 trucks scheduled for today, also expecting Hertz JD 650 dozer to assist in excavating and consolidation
0745 began escorting trucks in and out of incinerator area for loading, all loaded and on the road without incident
Continued with the excavation, consolidating and sampling operations after loadout completed, out of site at 1600 hours
2 additional trucks showed up today and we loaded them this afternoon, 11 trucks in total today, leaves only 4 tomorrow.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 9168/38812 | 0745 | 0845 | 006184846 JJK | 29,400 | 50,000 | 79,400 |
| 318/38807 | 0745 | 0845 | 006184847 JJK | 30,500 | 47,000 | 77,500 |
| 7164/38628 | 0850 | 0950 | 006184848 JJK | 28,200 | 50,000 | 78,200 |
| 7151/38815 | 0850 | 0950 | 006184850 JJK | 28,600 | 50,000 | 78,600 |
| 9163/38804 | 1000 | 1045 | 006184851 JJK | 29,200 | 49,000 | 78,200 |
| 9167/38811 | 1000 | 1045 | 006184852 JJK | 29,400 | 50,000 | 79,400 |
| 7170/38800 | 1045 | 1130 | 006184853 JJK | 28,500 | 51,000 | 79,500 |
| 7153/38621 | 1045 | 1130 | 006184854 JJK | 28,400 | 51,500 | 79,900 |
| 7176/3806 | 1145 | 1215 | 006184856 JJK | 28,000 | 50,000 | 78,000 |
| 9165/38809 | 1340 | 1425 | 006213659 JJK | 29,000 | 50,000 | 79,000 |
| 7183/38816 | 1420 | 1450 | 006213660 JJK | 28,000 | 50,000 | 78,000 |
| | | | | | 548,500 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 6 | | |
| Estimated pounds shipped: today | 548,500 | | |
| Trucks loaded: to date | 17 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 853,400 | 426.70 | 25.10 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | |
| | | | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Friday, April 17, 2009**

**Weather:**
Sunny/Warm (60-75 degrees)

**Description of Work:**
Crew arrived onsite at 0700, trucks already at Gate 10, held tailgate safety meeting and began checking in trucks.
4 trucks scheduled for today, additional two yesterday reduced todays truck count
0745 began escorting trucks in and out of incinerator area for loading, all loaded and on the road without incident
Continued with the excavation, consolidating and sampling operations after loadout completed, out of site at 1600 hours
NSP -80% completed and SSP 60% completed everything tested and excavated to 1-1.5' bgs.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 6191/38823 | 0750 | 0840 | 006213655 JJK | 28,500 | 51,000 | 79,500 |
| 7177/3802 | 0750 | 0840 | 006213656 JJK | 28,000 | 51,000 | 79,000 |
| 7175/38803 | 0850 | 0930 | 006213657 JJK | 28,300 | 50,000 | 78,300 |
| 7162/38818 | 0850 | 0930 | 006213658 JJK | 28,000 | 51,800 | 79,800 |
| | | | | | | 0 |
| | | | | | 203,800 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 4 | | |
| Estimated pounds shipped: today | 203,800 | | |
| Trucks loaded: to date | 21 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 1,057,200 | 528.60 | 25.17 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | A. Montouth | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Monday, April 20, 2009**

**Weather:**
Cloudy w/ Showers today (temp: 40-50 degrees)

**Description of Work:**
Crew arrived onsite at 0700, trucks already at Gate 10, held tailgate safety meeting and began checking in trucks.
9 trucks scheduled for today, but the remaining 6 scheduled for Tuesday are at WalMart parking lot waiting to see if they can get loaded tod
0745 began escorting trucks in and out of incinerator area for loading, loaded all 15 trucks today without incident
Completed the loading of the 15th truck at approximately 2:00 pm today, gave crew a late lunch break and then continued to excavate SSP NSP -80% completed and SSP 70% completed everything tested and excavated to 1-1.5' bgs.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 9167/38811 | 0800 | 0845 | 006213661 JJK | 29,300 | 50,200 | 79,500 |
| 9163/38804 | 0800 | 0845 | 006213662 JJK | 29,400 | 50,000 | 79,400 |
| 7164/38628 | 0845 | 0945 | 006213663 JJK | 28,200 | 50,000 | 78,200 |
| 7170/38800 | 0845 | 0945 | 006213664 JJK | 28,400 | 51,000 | 79,400 |
| 7151/38815 | 0945 | 1020 | 006213665 JJK | 28,600 | 50,000 | 78,600 |
| 7176/3806 | 0945 | 1020 | 006213666 JJK | 28,000 | 50,000 | 78,000 |
| 7153/38621 | 1030 | 1115 | 006213667 JJK | 28,500 | 51,000 | 79,500 |
| 9168/38812 | 1030 | 1115 | 006213668 JJK | 29,400 | 50,000 | 79,400 |
| 318/38807 | 1115 | 1145 | 006213669 JJK | 30,500 | 47,500 | 78,000 |
| 9165/38809 | 1115 | 1145 | 006184911 JJK | 29,000 | 50,000 | 79,000 |
| 7183/38816 | 1145 | 1230 | 006184866 JJK | 28,000 | 50,000 | 78,000 |
| 7175/38803 | 1145 | 1230 | 006184867 JJK | 28,000 | 50,000 | 78,000 |
| 7162/38818 | 1230 | 1315 | 006184873 JJK | 28,000 | 51,000 | 79,000 |
| 7177/3802 | 1230 | 1315 | 006184874 JJK | 28,000 | 50,000 | 78,000 |
| 6191/38823 | 1315 | 1345 | 006184875 JJK | 28,500 | 51,000 | 79,500 |
| | | | | | 751,700 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 15 | | |
| Estimated pounds shipped: today | 751,700 | | |
| Trucks loaded: to date | 36 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 1,808,900 | **904.45** | **25.12** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | A. Montouth | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |

lay

until 3:45

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Tuesday, April 21, 2009**

**Weather:**
Partly Sunny/Warm (temp: 45-55 degrees)

**Description of Work:**
Crew on site at 0700, the incinerator is still down with a water leak, tailgate safety meeting held and work started for today
Continued excavation of the SSP and the transfer of the material to the NSP for consolidation into the northeast corner for loadout.
South Settling Pond (SSP) excavation has been completed (100%) need to finish with the sampling tomorrow morning.
Samples being taken and analyzed using the XRF machine as each 25 X 25 grid is complete, also every 20 linear feet along the berm.
Two samples came back above the clean up level and had to be over excavated an additional foot, resample was good.
15 trucks scheduled for tomorrow and incinerator will still be down so we'll not have to wait until 0800 to enter SWMU 39 to begin loading

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | 0 |
| | | | | | | 0 |
| NO TRUCKS TODAY | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
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| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 0 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 36 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 1,808,900 | **904.45** | **25.12** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | A. Montouth | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |

| | | | |
|---|---|---|---|
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Wednesday, April 22, 2009**

**Weather:**
Cloudy/Windy/Cold (temp: 35-45 degrees)

**Description of Work:**
Crew on site at 0700, the incinerator is still down with a water leak, tailgate safety meeting held and work started for today
First of the trucks for today are at Gate 10 and being signed in and inspected, 0715 first 2 trucks are escorted to SWMU 39
South Settling Pond (SSP) excavation samples being completed today, some sidewalls along were Shaw transferred to NSP need to be cle
and resampled, all came back good after additional 1' was removed.
All 15 trucks loaded and escorted out of Gate 10 at approximately 1245, crew broke for lunch then continued excavation and consolidation
15 trucks scheduled for Friday the status of the incinerator start up is still not known.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 9167/38811 | 0720 | 0800 | 006184912 JJK | 29,300 | 49,500 | 78,800 |
| 9163/38804 | 0720 | 0800 | 006184913 JJK | 29,300 | 49,000 | 78,300 |
| 7164/38628 | 0800 | 0845 | 006184914 JJK | 28,200 | 50,000 | 78,200 |
| 7170/38800 | 0800 | 0845 | 006184915 JJK | 28,400 | 51,000 | 79,400 |
| 9168/38812 | 0845 | 0930 | 006184916 JJK | 29,400 | 50,000 | 79,400 |
| 7176/3806 | 0845 | 0930 | 006184917 JJK | 28,000 | 50,000 | 78,000 |
| 9165/38809 | 0930 | 1000 | 006184918 JJK | 29,000 | 50,000 | 79,000 |
| 7183/38816 | 0930 | 1000 | 006184919 JJK | 28,000 | 50,000 | 78,000 |
| 7175/38803 | 1005 | 1045 | 006184920 JJK | 28,000 | 50,000 | 78,000 |
| 7162/38818 | 1005 | 1045 | 006184921 JJK | 28,000 | 51,900 | 79,900 |
| 6191/38823 | 1045 | 1125 | 006184922 JJK | 28,500 | 50,000 | 78,500 |
| 318/38807 | 1045 | 1125 | 006184923 JJK | 30,500 | 47,500 | 78,000 |
| 7177/3802 | 1125 | 1205 | 006184924 JJK | 28,000 | 51,000 | 79,000 |
| 7153/38621 | 1125 | 1205 | 006184857 JJK | 28,500 | 50,000 | 78,500 |
| 7151/38815 | 1205 | 1235 | 006184858 JJK | 28,600 | 50,000 | 78,600 |
| | | | | | 749,900 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 15 | | |
| Estimated pounds shipped: today | 749,900 | | |
| Trucks loaded: to date | 51 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 2,558,800 | **1,279.40** | **25.09** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | A. Montouth | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |

| | | | |
|---|---|---|---|
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |

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**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Thursday, April 23, 2009**

**Weather:**
Clear/Sunny/Windy (temp: 38-55 degrees)

**Description of Work:**
Crew on site at 0700, the incinerator is still down with a water leak, tailgate safety meeting held and work started for today
Crew into site at 0730 and continuing with the excavation and consolidation of material in the North Settling Pond.
South Settling Pond samples were completed and all samples are below clean up levels.
Working on consolidation pile for load out, pile is approximately 70' X 50' X 12' in size ( 1556 cyds)
15 trucks scheduled for Friday the  incinerator will start up today at 4:00 pm and we'll get access tomorrow at 8:00 am to begin loadout

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| NO TRUCKS TODAY | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 0 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 51 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 2,558,800 | **1,279.40** | **25.09** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | A. Montouth | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Friday, April 24, 2009**

**Weather:**
Clear/Sunny/Windy (temp: 45-75 degrees)

**Description of Work:**
Crew on site at 0700, the incinerator is still down with a water leak, tailgate safety meeting held and work started for today
At 0715 the first of the trucks are signed in and inspected and on way to SWMU 39, to be loaded
Trucks being loaded and escorted in without incident, everything going smoothly, 14 trucks made it into the site today, (1 missing)
Continued on consoldation of NSP material for loadout on Monday, 15 trucks scheduled, and confirmation samples being prepared for shipı
Hertz repaired ignition which was broken Thursday when key broke off during the afternoon.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 318/38807 | 0720 | 0800 | 006184876 JJK | 30,500 | 47,000 | 77,500 |
| 7175/38803 | 0720 | 0800 | 006184859 JJK | 28,000 | 50,000 | 78,000 |
| 9167/38811 | 0800 | 0835 | 006184860 JJK | 29,400 | 49,500 | 78,900 |
| 9163/38804 | 0800 | 0835 | 006184861 JJK | 29,300 | 49,400 | 78,700 |
| 9165/38809 | 0835 | 0915 | 006184862 JJK | 29,000 | 50,000 | 79,000 |
| 7183/38816 | 0835 | 0915 | 006184863 JJK | 28,000 | 50,000 | 78,000 |
| 7164/38628 | 0920 | 1000 | 006184864 JJK | 28,200 | 50,000 | 78,200 |
| 7170/38800 | 0920 | 1000 | 006184865 JJK | 28,400 | 50,000 | 78,400 |
| 6191/38823 | 1005 | 1040 | 006184925 JJK | 28,500 | 50,500 | 79,000 |
| 7177/3802 | 1005 | 1040 | 006184926 JJK | 28,000 | 51,000 | 79,000 |
| 7162/38818 | 1040 | 1120 | 006184927 JJK | 28,000 | 50,000 | 78,000 |
| 7153/38621 | 1040 | 1120 | 006184928 JJK | 28,500 | 50,000 | 78,500 |
| 7151/38815 | 1120 | 1150 | 006184929 JJK | 28,600 | 50,000 | 78,600 |
| 7176/3806 | 1330 | 1400 | 006184930 JJK | 28,000 | 50,000 | 78,000 |
| | | | | | | 0 |
| | | | | | 697,400 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 14 | | |
| Estimated pounds shipped: today | 697,400 | | |
| Trucks loaded: to date | 65 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,256,200 | **1,628.10** | **25.05** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | A. Montouth | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Monday, April 27, 2009**

**Weather:**
Clear/Sunny/Windy (temp: 45-75 degrees)

**Description of Work:**
Crew on site at 0700, the incinerator is up and running again will be down by 0730, tailgate safety meeting held and work started for today
At 0745 the first of the trucks are signed in and inspected and on way to SWMU 39, to be loaded
Trucks being loaded and escorted in without incident, everything going smoothly, 12 trucks made it into the site today, (3 missing)
Continued on consoldation of NSP material for loadout this week, no trucks scheduled tomorrow, but we expect some to show up early, will
Cat Loader called off rent today, 22 confirmation samples sent to TestAmerica this afternoon.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 318/38807 | 0735 | 0815 | 006184932 JJK | 30,500 | 47,500 | 78,000 |
| 9165/38809 | 0735 | 0815 | 006184933 JJK | 29,000 | 50,000 | 79,000 |
| 9163/38804 | 0815 | 0850 | 006184934 JJK | 29,300 | 50,000 | 79,300 |
| 9167/38811 | 0815 | 0850 | 006184935 JJK | 29,300 | 50,000 | 79,300 |
| 7175/38803 | 0850 | 0930 | 006184940 JJK | 28,300 | 50,000 | 78,300 |
| 6191/38823 | 0850 | 0930 | 006184941 JJK | 28,500 | 51,500 | 80,000 |
| 7177/3802 | 0930 | 1000 | 006184942 JJK | 28,000 | 51,000 | 79,000 |
| 7164/38628 | 0930 | 1000 | 006184943 JJK | 28,200 | 50,000 | 78,200 |
| 7170/38800 | 1005 | 1040 | 006184944 JJK | 28,400 | 51,000 | 79,400 |
| 7162/38818 | 1005 | 1040 | 006184945 JJK | 28,000 | 51,800 | 79,800 |
| 7153/38621 | 1045 | 1130 | 006184946 JJK | 28,500 | 50,000 | 78,500 |
| 7183/38816 | 1045 | 1130 | 006184947 JJK | 28,000 | 50,000 | 78,000 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 602,800 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 12 | | |
| Estimated pounds shipped: today | 602,800 | | |
| Trucks loaded: to date | 77 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 3,859,000 | **1,929.50** | **25.06** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |

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**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Tuesday, April 28, 2009**

**Weather:**
Clear/Sunny/Windy (temp: 50-85 degrees)

**Description of Work:**
Crew on site at 0700, the incinerator is up and running again will be down by 0730, tailgate safety meeting held and work started for today
No trucks at gate 10 this morning, but we expect a couple to arrive today, crew into site to continue with consolidation of material
1100 hours the first truck arrives at gate 10, truck inspected and escorted to SWMU 39 for loading, 2 other trucks follow this afternoon.
Completed consoldation of NSP material for loadout into north east corner (approx. 50x50x18 area of material to be loaded)
Decontaminated JD 650 dozer today and called off rent, also finished preparing fence and fence posts for disposal.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 318/38807 | 1030 | 1100 | 006184931 JJK | 30,500 | 48,000 | 78,500 |
| 7151/38815 | 1230 | 1300 | 006184948 JJK | 28,600 | 50,000 | 78,600 |
| 9165/38809 | 1315 | 1345 | 006184950 JJK | 29,000 | 50,000 | 79,000 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 148,000 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 3 | | |
| Estimated pounds shipped: today | 148,000 | | |
| Trucks loaded: to date | 80 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 4,007,000 | **2,003.50** | **25.04** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Wednesday, April 29, 2009**

**Weather:**
Partly Cloudy/ Cool (temp. - 50-55 degrees)

**Description of Work:**
Crew on site at 0700, the incinerator is up and running again will be down by 0730, tailgate safety meeting held and work started for today
First 5 trucks at gate 10 this morning, inspecting and signing in to site, crew escorts first 2 into site at 0745
Continued loading and consolidating material into northeast corner of NSP for loadout.
Completed 11 trucks to day, totals to date 91 loads shipped approximately 2154.25 tons shipped.
Demobilization of Hertz pick up truck today also demobilized R.Lacson and G. Griswold

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 9167/38811 | 0745 | 0815 | 006184951 JJK | 29,300 | 49,500 | 78,800 |
| 9163/38804 | 0745 | 0815 | 006184952 JJK | 29,300 | 50,000 | 79,300 |
| 7175/38803 | 0815 | 0850 | 006184953 JJK | 28,300 | 51,000 | 79,300 |
| 7177/3802 | 0815 | 0850 | 006184954 JJK | 28,000 | 51,000 | 79,000 |
| 7183/38816 | 0850 | 0930 | 006184955 JJK | 28,000 | 50,000 | 78,000 |
| 7164/38628 | 0850 | 0930 | 006184956 JJK | 28,200 | 50,000 | 78,200 |
| 7170/38800 | 0930 | 1020 | 006184957 JJK | 28,400 | 50,000 | 78,400 |
| 7153/38621 | 0930 | 1020 | 006184958 JJK | 28,500 | 51,000 | 79,500 |
| 7162/38818 | 1020 | 1100 | 006184959 JJK | 28,000 | 51,000 | 79,000 |
| 917/3812 | 1020 | 1100 | 006184960 JJK | 30,500 | 49,000 | 79,500 |
| 680/38801 | 1130 | 1215 | 006184961 JJK | 30,000 | 49,000 | 79,000 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 551,500 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 11 | | |
| Estimated pounds shipped: today | 551,500 | | |
| Trucks loaded: to date | 91 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 4,558,500 | **2,279.25** | **25.05** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Thursday, April 30, 2009**

**Weather:**
Partly Cloudy/ Cool (temp. - 50-55 degrees)

**Description of Work:**
Crew on site at 0700 tailgate safety meeting held and work plan for today discussed
Moved to FLFA since we've been locked out of SWMU until Monday May 11, 2009.
Collected additional samples and tested using the XRF to help delineate the extent of the 3 areas we need to excavate and dispose.
Renewed work permit for both FLFA and SWMU 51 for an additional month each

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| NO TRUCKS TODAY | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
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| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 0 | |

**Delays in Schedule:**
Incinerator needs to run continuously for about 10 days to catch up with the plant, SWMU 39 shut down at 4/30/09 until 5/11/09

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 91 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 4,558,500 | **2,279.25** | **25.05** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | Steve Banks | | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/04/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Friday, May 01, 2009**

**Weather:**
Partly Cloudy/ Cool (temp. - 50-55 degrees)

**Description of Work:**
Setting up today for additional two (2) trucks for SWMU 51. sample results require an additional excavation close to the surface at both the north and south end of the excavation. Preparing for the additional trucks and trying to dry out the area to allow access.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | 0 |
| | | | | | | 0 |
| No Trucks Today | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 0 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 91 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 4,558,500 | **2,279.25** | **25.05** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Monday, May 04, 2009**

**Weather:**
Showers- AM Clearing- PM (temp 45 - 65 degrees)

**Description of Work:**
Hertz equipment delivered JD 230 excavator to SWMU 51 to excavate and load the 2 additional trucks scheduled for tomorrow.
Hertz also picked up the JD 650 dozer and removed from SWMU 39

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | 0 |
| | | | | | | 0 |
| No Trucks Today | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
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| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 0 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 91 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 4,558,500 | **2,279.25** | **25.05** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Tuesday, May 05, 2009**

**Weather:**
Showers/Cloudy (temp.45 degrees)

**Description of Work:**
Crew onsite this morning to excavate and loadout additional 2 trucks at SWMU 51, also renewed SWMU 51 entry permit
0800 2 trucks arrive from Beelman Truck Co. for additional loads from SWMU 51 going to Canada.
After loadout and manifesting was completed we pulled the final 2 samples from SWMU 51, and sent to the Lab.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 6191/38823 | 0815 | 1000 | 001202666 FLE | 28,500 | 51,500 | 80,000 |
| 7177/3802 | 1000 | 1100 | 001202667 FLE | 28,000 | 51,000 | 79,000 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 102,500 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 2 | | |
| Estimated pounds shipped: today | 102,500 | | |
| Trucks loaded: to date | 80 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 4,077,600 | 2,038.80 | 25.49 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Wednesday, May 06, 2009**
**Thursday, May 07, 2009**
**Friday, May 08, 2009**

**Weather:**
Showers/Cloudy (temp.45 degrees)

**Description of Work:**
Shut site down for extended weekend trip home for the crew, site will start up again on Monday.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
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| | | | | | | 0 |
| | | | | | 0 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 93 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 4,661,000 | 2,330.50 | 25.06 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |

| | | | |
|---|---|---|---|
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Monday, May 11, 2009**

**Weather:**
Showers/Cloudy (temp.45 - 55 degrees)

**Description of Work:**
Crew back onsite this morning at 0700 to start loadout of trucks from SWMU 39.
15 trucks scheduled for today, first set being checked at Gate 10 and being escorted into the site at 0800
After loadout and manifesting was completed continued consolidation of material in north pond until 1600 hours turned back to ATK

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 502/3820 | 0745 | 0845 | 006184967 JJK | 30,600 | 49,000 | 79,600 |
| 504/38629 | 0745 | 0845 | 006184968 JJK | 31,000 | 49,000 | 80,000 |
| 627/222 | 0845 | 0920 | 006184969 JJK | 30,000 | 48,000 | 78,000 |
| 968/38805 | 0845 | 0920 | 006184970 JJK | 30,000 | 50,000 | 80,000 |
| 680/38801 | 0920 | 0955 | 006184971 JJK | 30,000 | 50,000 | 80,000 |
| 678/38813 | 0920 | 0955 | 006184972 JJK | 30,000 | 50,000 | 80,000 |
| 690/38802 | 0955 | 1035 | 006184973 JJK | 30,000 | 49,000 | 79,000 |
| 318/38807 | 0955 | 1035 | 006184974 JJK | 30,500 | 48,000 | 78,500 |
| 9167/38811 | 1035 | 1115 | 006184975 JJK | 29,300 | 50,000 | 79,300 |
| 7164/38628 | 1035 | 1115 | 006184976 JJK | 28,200 | 50,000 | 78,200 |
| 7177/3802 | 1115 | 1145 | 006184977 JJK | 28,000 | 51,000 | 79,000 |
| 9163/38804 | 1115 | 1145 | 006184978 JJK | 29,300 | 50,000 | 79,300 |
| 556/3803 | 1145 | 1220 | 006184979 JJK | 30,400 | 49,000 | 79,400 |
| 917/3812 | 1145 | 1220 | 006184980 JJK | 30,500 | 49,000 | 79,500 |
| 7162/38818 | 1220 | 12445 | 006184981 JJK | 28,000 | 51,000 | 79,000 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 743,000 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 15 | | |
| Estimated pounds shipped: today | 743,000 | | |
| Trucks loaded: to date | 106 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 5,301,500 | **2,650.75** | **25.01** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Raddy Lacson | Chet Brinser | |
| Shaw E & I | Steve Banks | Jeff Hillebrand | Greg Griswold | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Tuesday, May 12, 2009**

**Weather:**
Sunny and Warming (65 -75 degrees)

**Description of Work:**
Crew back onsite this morning at 0700 to continue work at SWMU 39.
no trucks scheduled for today, pulling samples for shipment to lab for dioxin analysis and continued XRF as we excavate NSP.
preparing for trucks tomorrow and continued consolidation of material in north pond until 1600 hours turned back to ATK

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
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| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 0 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 106 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 5,301,500 | **2,650.75** | **25.01** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Steve Banks | Chet Brinser | |
| Shaw E & I | Jeff Hillebrand | Greg Griswold | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Wednesday, May 13, 2009**

**Weather:**
Sunny/Clear/Warm (65-70 degrees today)

**Description of Work:**
Crew back onsite this morning at 0700 to start loadout of trucks from SWMU 39.
16 trucks scheduled for today, first set being checked at Gate 10 and being escorted into the site at 0800
After loadout and manifesting was completed continued consolidation of material in north pond until 1600 hours turned back to ATK

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 7183/38816 | 0745 | 0830 | 006184962 JJK | 28,000 | 50,000 | 78,000 |
| 318/38807 | 0745 | 0830 | 006184982 JJK | 30,500 | 49,000 | 79,500 |
| 680/38801 | 0830 | 0900 | 006184983 JJK | 30,000 | 50,000 | 80,000 |
| 678/38813 | 0830 | 0900 | 006184984 JJK | 30,000 | 48,000 | 78,000 |
| 690/38802 | 0900 | 0945 | 006184985 JJK | 30,000 | 50,000 | 80,000 |
| 502/3820 | 0900 | 0945 | 006184986 JJK | 30,500 | 49,000 | 79,500 |
| 504/38629 | 0945 | 1015 | 006184987 JJK | 31,000 | 49,000 | 80,000 |
| 968/38805 | 0945 | 1015 | 006184988 JJK | 29,500 | 50,000 | 79,500 |
| 627/222 | 1015 | 1050 | 006184989 JJK | 30,000 | 48,000 | 78,000 |
| 9167/38811 | 1015 | 1050 | 006184990 JJK | 29,300 | 49,500 | 78,800 |
| 7164/38628 | 1050 | 1120 | 006184991 JJK | 28,200 | 50,000 | 78,200 |
| 7177/3802 | 1050 | 1120 | 006184992 JJK | 28,000 | 51,000 | 79,000 |
| 7162/38818 | 1125 | 1155 | 006184993 JJK | 28,000 | 51,000 | 79,000 |
| 9163/38804 | 1125 | 1155 | 006184994 JJK | 29,300 | 50,000 | 79,300 |
| 556/3803 | 1155 | 1230 | 006184995 JJK | 30,400 | 49,000 | 79,400 |
| 917/3812 | 1155 | 1230 | 006184996 JJK | 30,500 | 49,000 | 79,500 |
| | | | | | | 0 |
| | | | | | 792,500 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 15 | | |
| Estimated pounds shipped: today | 792,500 | | |
| Trucks loaded: to date | 122 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 6,094,000 | **3,047.00** | **24.98** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Jeff Hillebrand | Chet Brinser | |
| Shaw E & I | Steve Banks | Greg Griswold | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Thursday, May 14, 2009**

**Weather:**
Partly Cloudy/Warm (65 -75 degrees)

**Description of Work:**
Crew back onsite this morning at 0700 incinerator running today we'll work at SWMU 51 and FLFA today
No trucks today at SWMU 39, cleaning up all fencing, barb wire and poles at SWMU 51 also pulled samples from FLFA
Set up XRF at FLFA and completed remaining samples from SWMU 39.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | 0 |
| NO TRUCKS TODAY | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
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| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 0 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 122 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 6,094,000 | **3,047.00** | **24.98** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Steve Banks | Chet Brinser | |
| Shaw E & I | Jeff Hillebrand | Greg Griswold | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Friday, May 15, 2009**

**Weather:**
Cloudy/Warm (65-70 degrees today)

**Description of Work:**
Crew back onsite this morning at 0700 to start loadout of trucks from SWMU 39.
16 trucks scheduled for today, first set being checked at Gate 10 and being escorted into the site at 0800
After loadout and manifesting was completed continued consolidation of material in north pond until 1600 hours turned back to ATK

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 318/38807 | 0800 | 0830 | 006184997 JJK | 30,500 | 48,000 | 78,500 |
| 627/222 | 0800 | 0830 | 006184998 JJK | 30,000 | 48,000 | 78,000 |
| 968/38805 | 0830 | 0900 | 006184999 JJK | 29,500 | 50,000 | 79,500 |
| 678/38813 | 0830 | 0900 | 006184500 JJK | 30,000 | 50,000 | 80,000 |
| 680/38801 | 0900 | 0930 | 004686162 JJK | 30,000 | 50,000 | 80,000 |
| 690/38802 | 0900 | 0930 | 004686163 JJK | 30,000 | 50,000 | 80,000 |
| 7183/38816 | 0930 | 1000 | 004686164 JJK | 28,000 | 50,000 | 78,000 |
| 502/3820 | 0930 | 1000 | 004686165 JJK | 30,000 | 49,000 | 79,000 |
| 504/38629 | 1010 | 1040 | 004686166 JJK | 31,000 | 49,000 | 80,000 |
| 9167/38811 | 1010 | 1040 | 004686167 JJK | 29,300 | 50,000 | 79,300 |
| 7177/3802 | 1040 | 1110 | 004686168 JJK | 28,000 | 51,000 | 79,000 |
| 9163/38804 | 1040 | 1110 | 004686169 JJK | 29,300 | 50,000 | 79,300 |
| 556/3803 | 1110 | 1145 | 004686170 JJK | 30,400 | 49,000 | 79,400 |
| 917/3812 | 1110 | 1145 | 004686323 JJK | 30,500 | 49,000 | 79,500 |
| 7164/38628 | 1145 | 1215 | 004686188 JJK | 28,200 | 50,000 | 78,200 |
| 7162/38818 | 1145 | 1215 | 004686189 JJK | 28,000 | 50,000 | 78,000 |
| | | | | | | 0 |
| | | | | | 793,000 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 16 | | |
| Estimated pounds shipped: today | 793,000 | | |
| Trucks loaded: to date | 138 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 6,887,000 | **3,443.50** | **24.95** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Jeff Hillebrand | Chet Brinser | |
| Shaw E & I | Steve Banks | Greg Griswold | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Monday, May 18, 2009**

**Weather:**
Sunny/Cool (45-60 degrees today)

**Description of Work:**
Crew back onsite this morning at 0700 to start loadout of trucks from SWMU 39.
11 trucks scheduled for today, first set being checked at Gate 10 and being escorted into the site at 0800
After loadout and manifesting was completed continued consolidation of material in north pond until 1600 hours turned back to ATK

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 318/38807 | 0815 | 0845 | 004686324 JJK | 30,500 | 48,000 | 78,500 |
| 9166/38810 | 0815 | 0845 | 004686325 JJK | 28,000 | 50,000 | 78,000 |
| 7183/38816 | 0845 | 0915 | 004686326 JJK | 28,000 | 50,000 | 78,000 |
| 800/38819 | 0845 | 0915 | 004686327 JJK | 28,800 | 50,000 | 78,800 |
| 794/38624 | 0915 | 1000 | 004686328 JJK | 31,000 | 48,500 | 79,500 |
| 7175/38803 | 0915 | 1000 | 004686329 JJK | 28,300 | 50,000 | 78,300 |
| 9165/38809 | 1000 | 1045 | 004686330 JJK | 29,000 | 50,000 | 79,000 |
| 7153/38621 | 1000 | 1045 | 004686331 JJK | 28,500 | 50,000 | 78,500 |
| 9168/38812 | 1045 | 1115 | 004686332 JJK | 29,400 | 50,000 | 79,400 |
| 7170/38800 | 1045 | 1115 | 004686333 JJK | 28,000 | 50,000 | 78,000 |
| 7151/38815 | 1130 | 1200 | 004686187 JJK | 28,600 | 50,000 | 78,600 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 546,500 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 11 | | |
| Estimated pounds shipped: today | 546,500 | | |
| Trucks loaded: to date | 149 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 7,433,500 | **3,716.75** | **24.94** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Jeff Hillebrand | Chet Brinser | |
| Shaw E & I | Steve Banks | Greg Griswold | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Tuesday, May 19, 2009**

**Weather:**
Sunny/Cool (45-60 degrees today)

**Description of Work:**
Crew back onsite this morning at 0700 to start loadout of trucks from SWMU 39.
8 trucks scheduled for today, first set being checked at Gate 10 and being escorted into the site at 0800
After loadout and manifesting was completed continued consolidation of material in north pond until 1600 hours turned back to ATK

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 9167/38811 | 0815 | 0900 | 006184963 JJK | 29,300 | 50,000 | 79,300 |
| 7177/3802 | 0815 | 0900 | 006184964 JJK | 28,000 | 51,000 | 79,000 |
| 9163/38804 | 0900 | 0945 | 006184965 JJK | 29,300 | 50,000 | 79,300 |
| 7164/38628 | 0900 | 0945 | 006184966 JJK | 28,200 | 50,000 | 78,200 |
| 7162/38818 | 0945 | 1015 | 004686190 JJK | 28,000 | 51,900 | 79,900 |
| 318/38807 | 1200 | 1230 | 004686334 JJK | 30,500 | 47,000 | 77,500 |
| 800/38819 | 1200 | 1230 | 004686335 JJK | 28,800 | 50,000 | 78,800 |
| 7175/38803 | 1400 | 1430 | 004686336 JJK | 28,300 | 51,000 | 79,300 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 400,900 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 8 | | |
| Estimated pounds shipped: today | 400,900 | | |
| Trucks loaded: to date | 157 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 7,834,400 | **3,917.20** | **24.95** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Jeff Hillebrand | Chet Brinser | |
| Shaw E & I | Steve Banks | Greg Griswold | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Wednesday, May 20, 2009**

**Weather:**
Sunny/Cool (50-70 degrees today)

**Description of Work:**
Crew back onsite this morning at 0700 to start loadout of trucks from SWMU 39.
6 trucks scheduled for today, first set being checked at Gate 10 and being escorted into the site at 0800
These are the final trucks at SWMU 39, one load remaining truck will be here tomorrow also starting backfill of SWMU 51 today, JWB sent 5
JWB Contractors delivered 45 loads of clean fill today, at 10 cyds/load (per discussions with Jeff Buchinsky) Off site 1700 hrs.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 7183/38816 | 0800 | 0845 | 004686337 JJK | 28,000 | 50,000 | 78,000 |
| 9168/38812 | 0800 | 0845 | 004689030 JJK | 29,400 | 50,000 | 79,400 |
| 7170/38800 | 0945 | 1015 | 006189031 JJK | 28,000 | 50,000 | 78,000 |
| 7151/38815 | 0945 | 1015 | 006189032 JJK | 28,600 | 50,000 | 78,600 |
| 7177/3802 | 1445 | 1530 | 006189033 JJK | 28,000 | 51,000 | 79,000 |
| 9163/38804 | 1445 | 1530 | 006189034 JJK | 29,300 | 50,000 | 79,300 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 301,000 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 6 | | |
| Estimated pounds shipped: today | 301,000 | | |
| Trucks loaded: to date | 163 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 8,135,400 | 4,067.70 | 24.96 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Jeff Hillebrand | Chet Brinser | |
| Shaw E & I | Steve Banks | Greg Griswold | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

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**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39**

**Thursday, May 21, 2009**

**Weather:**
Partly Cloudy/Cool (am) Warm (pm) - (50-70 degrees today)

**Description of Work:**
Crew back onsite this morning at 0700 to continue backfill operations at SWMU 51 and load out last load at SWMU 39
1 truck for SWMU 39 today loaded, cannot complete samples until next week.
JWB had 5 trucks running backfill material to SWMU 51 today, continued working until 1700 hours.
JWB Contractors delivered 54 loads of clean fill today, at 10 cyds/load (per discussions with Jeff Buchinsky). Off site 1700 hrs.

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| 7164/38628 | 0745 | 0815 | 006189035 JJK | 28,200 | 50,000 | 78,200 |
| | | | | | | 0 |
| | | | | | | 0 |
| | | | | | 50,000 | |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: | Date | | |
|---|---|---|---|
| Trucks loaded: today | 1 | | |
| Estimated pounds shipped: today | 50,000 | | |
| Trucks loaded: to date | 164 | TONS | Avg. Tons/Trk. |
| estimated pounds shipped: to date | 8,185,400 | 4,092.70 | 24.96 |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Jeff Hillebrand | Chet Brinser | |
| Shaw E & I | Steve Banks | Greg Griswold | | |
| USACE | W. Rathbun | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, May 22, 2009**

**Weather:**
Sunny/Clear - Cool (am) / Warm (pm) - (60-75 degrees today)

**Description of Work:**
Partial crew onsite this morning at 0700 to continue backfill operations at SWMU 51
JWB had 6 trucks running backfill material to SWMU 51 today, continued working until 1700 hours.
JWB Contractors delivered 30 loads of clean fill today, at 10 cyds/load (per discussions with Jeff Buchinsky). Off site 1300 hrs.
Crew demobilized home for Memorial Day Weekend, will start up again on Tuesday, weather permitting.

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, May 26, 2009**

**Weather:**
Cloudy/Showers (50-60 degrees)

**Description of Work:**
Partial crew onsite this morning at 0700 to continue backfill operations at SWMU 51
Weather not cooperating and borrow area to wet to get trucks into for backfill material.
Completed install of backfill material stockpiled on Friday before the holiday weekend.
Also went over and photographed and walked SWMU 54 and the small arms reserve firing range for upcoming bids

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, May 27, 2009**

**Weather:**
Cloudy/Showers (50-60 degrees)

**Description of Work:**
Partial crew onsite this morning at 0700 to continue backfill operations at SWMU 51
Weather still not cooperating and borrow area to wet to get trucks into for backfill material.
Into SWMU 39 today to pull final samples and test remaining areas using XRF.
Moved Shaw Cat 330 from SWMU 39 to FLFA after decon of machine was complete.
All samples tested were good except one which was sent to lab for confirmation along with one additional sample to meet requirements for

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

SWM

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, May 28, 2009**

**Weather:**
Cloudy/Showers (50-60 degrees)

**Description of Work:**
Crew onsite this morning at 0700 to continue backfill operations at SWMU 51
Weather still not cooperating and borrow area to wet to get trucks into for backfill material.
Worked on SWMU 51 cleaning up area and trying to help dry out to allow backfill to continue
Met with plant safety and received permits for SWMU 41 well drilling operations

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, May 29, 2009**

**Weather:**
Cloudy/Showers (50-60 degrees)

**Description of Work:**
Crew onsite this morning at 0700 the rains yesterday made backfill impossible for today
Weather still not cooperating and borrow area to wet to get trucks into for backfill material.
Serviced equipment and vehicles today, made arrangements to move tracked equipment around site

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
Rain

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 01, 2009**

**Weather:**
Sunny and Warm 70 degrees today

**Description of Work:**
Crew onsite this morning at 0700 thesite is drying out, will regrade SWMU 51 to aid drying
Hertz equipment on site moving equipment, Decon of JD 200 today for demobilization

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| | | 0 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 129 | 1290 |

**Delays in Schedule:**
Rain

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, June 02, 2009**

**Weather:**
Sunny and Warm 70 degrees today

**Description of Work:**
Crew onsite this morning at 0700 Backfill trucks resume today
Trucks being signed in and searched at Gate 10, will run as many as possible today
Drillers beginning to work at SWMU 41 today also, no luck hit refusal in 2 separate locations today

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| | | 0 |
| | | |
| **Total SWMU 51 backfill** | 211 | 2110 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, June 03, 2009**

**Weather:**
Partly Sunny and Warm 70 - 80 degrees today

**Description of Work:**
Crew onsite this morning at 0700 Backfill trucks resume today
Trucks being signed in and searched at Gate 10, will run as many as possible today
Drillers attempting 3rd and final hole today at SWMU 41 refusal again today, will not continue
SWMU 51 backfill complete, 250 loads brings area to grade minus topsoil layer

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, June 04, 2009**

**Weather:**
Partly Sunny and Warm 70 - 80 degrees today

**Description of Work:**
Crew onsite this morning at 0700 beginning decon of equipment at SWMU 51
Cleaning up roadway at SWMU 51 and preparing for move to FLFA
Drillers on site moving drums (7) to storage area, could not complete without Shaw crew assisting

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/04/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, June 05, 2009**

**Weather:**
Rainy today 70 - 80 degrees today

**Description of Work:**
Crew onsite this morning at 0700 continuing decon of equipment at SWMU 51
Consolidationg drillers drums from 7 into 5 for sampling and disposal at later date
Crew off site at noon today due to weather

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 08, 2009**

**Weather:**
partly cloudy, warm today 70 - 80 degrees today

**Description of Work:**
Crew onsite this morning at 0700 Starting at FLFA today
Delineation of 4 excavation areas and installeation of silt fence around area completed today.
Making arrangements for backfill at SWMU 39 as soon as possible
Area by sink hole under water and too soft to allow excavator

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, June 09, 2009**

**Weather:**
Showers today, 70-75 degrees

**Description of Work:**
Crew onsite this morning at 0700 Starting at FLFA today
Complete setup work at FLFA today
Could not begin backfill at SWMU 39 everything to wet

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, May 20, 2009 | 45 | 450 |
| Thursday, May 21, 2009 | 54 | 540 |
| Friday, May 22, 2009 | 30 | 300 |
| Tuesday, June 02, 2009 | 82 | 820 |
| Wednesday, June 03, 2009 | 39 | 390 |
| | | |
| **Total SWMU 51 backfill** | 250 | 2500 |

**Delays in Schedule:**
Rain held up work today

**Verbal Instructions:**
None

| Shipments: SWMU 39 | Final | | |
|---|---|---|---|
| Trucks loaded: today | 0 | | |
| Estimated pounds shipped: today | 0 | | |
| Trucks loaded: to date | 164 | **TONS** | **Avg. Tons/Trk.** |
| estimated pounds shipped: to date | 8,185,400 | **4,092.70** | **24.96** |

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | | | | |
| Apex Environmental | | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, June 10, 2009**

**Weather:**
Clearing, Warm 70-80 degrees

**Description of Work:**
Crew onsite this morning at 0700, backfill for SWMU 39 to begin today
Incinerator shutting down to allow backfill to begin
JWB trucks at gate 10 being signed in and inspected for today
8 Trucks running today for JWB with backfill

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 79 | 790 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, June 11, 2009**

**Weather:**
Showers today, cool 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, backfillmaterial to wet to haul today
Incinerator shutting down will begin stockpiling material on hill to northeast of ponds for topsoil use
Scheduled repairs to Shaw 330 excavator with Shaw equipment group and Carter machinery

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 79 | 790 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, June 12, 2009**

**Weather:**
Clearing today, cool 60 - 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, backfill material to wet to haul today
Incinerator shutting down will continue stockpiling material on hill to northeast of ponds for topsoil use

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 79 | 790 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 15, 2009**

**Weather:**
Cloudy, Showers today, cool 50 - 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, backfill continuing today everything appears dry enough to work
Incinerator shutting down will continue importing of backfill to SWMU 39
Trucks at Gate 10 being inspected and signed in for the day

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 159 | 1590 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, June 16, 2009**

**Weather:**
Showers today, cool 50 - 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, no backfill today
Incinerator shutting down will continue on stockpile of top soil from mound at northeast side of ponds
Making arrangements for FLFA to start when work cannot be done at SWMU 39

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 159 | 1590 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, June 17, 2009**

**Weather:**
Rain continued today, cool 50 - 70 degrees

**Description of Work:**
Crew onsite this morning at 0700, No Work can be performed
Sending crew home foor a few days, will restart work on Monday 6/22/09
Made arrangements for backfill to restart on June 22, 2009, weather permitting

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 159 | 1590 |

**Delays in Schedule:**
weather delays ( June 17, 18 and 19)

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Jeff Hillebrand | Steve Banks |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 22, 2009**

**Weather:**
Clear and Warming 70 - 80 degress today

**Description of Work:**
Crew onsite this morning at 0700, areas dry and backfill operations continues
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 250 | 2500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
Wanda Jines stated incinerator will be down from 6/25 through 7/3 and we can work later those days

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, June 23, 2009**

**Weather:**
Sunny and Warm 70 - 80 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 342 | 3420 |

**Delays in Schedule:**
None

**Verbal Instructions:**
Spoke to security, Ron Gibson, about keeping gate 10 open longer when incinerator is down and he said it was fine with them.

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, June 24, 2009**

**Weather:**
Sunny and Warm 70 - 80 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 438 | 4380 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, June 25, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 561 | 5610 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, June 26, 2009**

**Weather:**
Partly Cloudy and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 685 | 6850 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, June 29, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 809 | 8090 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, June 30, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today
Started backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 941 | 9410 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, July 01, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1061 | 10610 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, July 02, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator down and backfill continues with 8 trucks running today, will run late today
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1171 | 11710 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, July 06, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew mobilizing back to site today, preparing areas after weekend rains to accept trucks tomorrow

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1171 | 11710 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, July 07, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, back on original schedule with shutdown of incinerator
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1250 | 12500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, July 08, 2009**

**Weather:**
Sunny and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator down again will work till 5 pm
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1346 | 13460 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Thursday, July 09, 2009**

**Weather:**
Partly Cloudy and Warm 65 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator down again will work till 7 pm
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1466 | 14660 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Friday, July 10, 2009**

**Weather:**
Cloudy, Cool 50-65 degrees

**Description of Work:**
Site to wet to accept trucks heavy showers over night, moving material around site grading and compacting
Incinerator restarting today at 4:00 pm

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| | | |
| **Total SWMU39 backfill** | 1466 | 14660 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Monday, July 13, 2009**

**Weather:**
Partly Cloudy 65 - 75 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator down again will work till 7 pm
Continued backfill in second pond today (east)

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1550 | 15500 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Tuesday, July 14, 2009**

**Weather:**
Sunny/Cool 45 - 75 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator running out by 4:00 pm

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1621 | 16210 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, July 15, 2009**

**Weather:**
Sunny/Warm 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator running out by 4:00 pm
At end of day moved equipment out of SWMU 39, dozer to SWMU 51 and Excavator to FLFA

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| Wednesday, July 15, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1705 | 17050 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |

| | | | |
|---|---|---|---|
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, July 16, 2009**
**Friday, July 17, 2009**

**Weather:**
Showers 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, moved to FLFA, incinerator cannot shut down for 10 days
Sampled drums from drilling at SWMU 41 and prepared FLFA for excavation activities
Also worked both days at SWMU 51 grading area and repairing rain damage
let crew go early Friday due to heavy rains

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| Wednesday, July 15, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1705 | 17050 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |

| | | | |
|---|---|---|---|
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, July 20, 2009**

**Weather:**
Heavy Rain today

**Description of Work:**
NO WORK TODAY

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| Wednesday, July 15, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1705 | 17050 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |

| | | | |
|---|---|---|---|
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, July 21, 2009**

**Weather:**
Cloudy/Humid 55-75 degrees

**Description of Work:**
Mobilized to FLFA and began excavation at the area.
Had plant utility people on site to help locate water line running along roadway to bottom of burn pit from top parking area
determined line below 1 foot level we are removing and will be cautious when digging near line
Stockpiling material at top of slope area for loadout beginning tomorrow
Walked burn pad to remove any debris which could puncture truck tires

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | 0 | |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, July 22, 2009**

**Weather:**
Partly Cloudy today 55-75 degrees

**Description of Work:**
On site at FLFA, tailgat held and work plan discussed with crew
Thompson trucking scheduled 6 trucks today, staggered 1 hour apart
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving
Continued excavating after loadout completed, discovered buried drum (30 gal) and stopped work, notified ATK and USACE and waited for response from Fire Dept and Safety Dept. Drum removed at ATK's direction and liquid sampled. Overpacked drum in a 55 gallon steel drum and moved to storage area, continued excavation after drum secured

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3432/86 | 0750 | 0830 | RAAP 0001 | 29,880 | 53,400 | 83,280 |
| 3135/54 | 0900 | 0925 | RAAP 0002 | 30,740 | 52,700 | 83,440 |
| 3130/58 | 0950 | 1025 | RAAP 0003 | 30,340 | 54,440 | 84,780 |
| 3145/53 | 1030 | 1100 | RAAP 0004 | 31,400 | 52,920 | 84,320 |
| 3455/44 | 1130 | 1200 | RAAP 0005 | 28,900 | 55,420 | 84,320 |
| 3455/92 | 1300 | 1415 | RAAP 0006 | 30,500 | 53,440 | 83,940 |
| | | | | | 322,320 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 6 | |
| Estimated pounds shipped: today | 322,320 | |
| Trucks loaded: to date | 6 | TONS |
| estimated pounds shipped: to date | 322,320 | 161.16 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, July 23, 2009**

**Weather:**
Sunny/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgat held and work plan discussed with crew
Thompson trucking scheduled 11 trucks today, staggered 30 minutes apart
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
Continued excavating after loadout completed, uncovered terra cota pipe from seprtic tank, ATK Utility department
on site to check and gave us permission to remove since tank and system were disconnected and abandoned.

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3432/86 | 0730 | 0800 | RAAP 0007 | 29,740 | 52,920 | 82,660 |
| 3135/54 | 0830 | 0850 | RAAP 0008 | 30,760 | 52,740 | 83,500 |
| 3145/53 | 0950 | 1015 | RAAP 0009 | 31,300 | 51,820 | 83,120 |
| 3455/42 | 1130 | 1200 | RAAP 0010 | 29,160 | 51,540 | 80,700 |
| 3427/63 | 1150 | 1210 | RAAP 0011 | 29,040 | 52,880 | 81,920 |
| 224 | 1245 | 1305 | RAAP 0012 | 25,620 | 42,400 | 68,020 |
| 3081 | 1245 | 1315 | RAAP 0013 | 25,960 | 48,960 | 74,920 |
| 3578 | 1315 | 1345 | RAAP 0014 | 25,380 | 42,280 | 67,660 |
| 3200 | 1315 | 1345 | RAAP 0015 | 24,880 | 43,680 | 68,560 |
| 429 | 1315 | 1345 | RAAP 0016 | 24,700 | 41,700 | 66,400 |
| 3087/13 | 1350 | 1415 | RAAP 0017 | 28,100 | 51,920 | 80,020 |
| | | | RAAP 0018 | 0 | 0 | 0 |
| | | | | | 532,840 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 11 | |
| Estimated pounds shipped: today | 532,840 | |
| Trucks loaded: to date | 17 | TONS |
| estimated pounds shipped: to date | 855,160 | 427.58 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |

| | | | |
|---|---|---|---|
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, July 24, 2009**

**Weather:**
Sunny/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgat held and work plan discussed with crew
No Trucks today, continued excavating and began XRF of areas previously excavated and stockpiles loaded out the past few days. Excavation remaining can be completed and stockpiled in various locations to expedite future loadouts.
Also spent time regrading SWMU 51 in preparation for top soil placement scheduled for next week

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | RAAP 0018 | 0 | 0 | 0 |
| | | | | | 0 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 0 | |
| Estimated pounds shipped: today | 0 | |
| Trucks loaded: to date | 17 | TONS |
| estimated pounds shipped: to date | 855,160 | 427.58 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, July 27, 2009**

**Weather:**
Partly Cloudy/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Thompson trucking scheduled 7 trucks today,should complete excavation if field testing has been accurate
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
FLFA excavation complete today, need 3 more trucks to finish shipments.

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3169/86 | 0925 | 1000 | RAAP 0018 | 29,620 | 45,280 | 74,900 |
| 3135/54 | 0930 | 1000 | RAAP 0019 | 30,720 | 50,100 | 80,820 |
| 3190/60 | 1000 | 1035 | RAAP 0020 | 30,540 | 53,360 | 83,900 |
| 3145/53 | 1000 | 1030 | RAAP 0021 | 32,020 | 50,180 | 82,200 |
| 3437/56 | 1045 | 1130 | RAAP 0022 | 29,680 | 54,080 | 83,760 |
| 3160 | 1325 | 1415 | RAAP 0023 | 25,500 | 49,740 | 75,240 |
| 3153 | 1325 | 1415 | RAAP 0024 | 25,760 | 48,980 | 74,740 |
| | | | | | 351,720 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 7 | |
| Estimated pounds shipped: today | 351,720 | |
| Trucks loaded: to date | 24 | TONS |
| estimated pounds shipped: to date | 1,206,880 | 603.44 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, July 28, 2009**

**Weather:**
Partly Cloudy/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Thompson trucking scheduled 3 trucks today,should complete loadout if field testing has been accurate
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
FLFA loadout almost completed today, need one additional truck, all XRF tests came back clean.

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3166 | 1345 | 1400 | RAAP 0025 | 25,480 | 48,900 | 74,380 |
| 3578 | 1405 | 1420 | RAAP 0026 | 25,580 | 45,240 | 70,820 |
| 3196/63 | 1430 | 1450 | RAAP 0027 | 29,120 | 54,780 | 83,900 |
| | | | | 0 | 0 | 0 |
| | | | | | 148,920 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 3 | |
| Estimated pounds shipped: today | 148,920 | |
| Trucks loaded: to date | 27 | TONS |
| estimated pounds shipped: to date | 1,355,800 | 677.90 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, July 29, 2009**

**Weather:**
Cloudy/Showers today 65-75 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Thompson trucking scheduled 1 last truck today, will complete loadout at FLFA
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
FLFA loadout almost completed today, need one additional truck, all XRF tests came back clean, packing samples today

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3455/42 | 1245 | 1330 | RAAP 0028 | 30,120 | 48,220 | 78,340 |
| | | | | 0 | 0 | 0 |
| | | | | | 48,220 | |

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 1 | |
| Estimated pounds shipped: today | 48,220 | |
| Trucks loaded: to date | 28 | **TONS** |
| estimated pounds shipped: to date | 1,404,020 | **702.01** |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, July 30, 2009**

**Weather:**
Cloudy/Showers today 65-75 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Decontamination of equipment on schedule for today
Clean up entire FLFA area being conducted, cleaning roadways and raking burn pad surface to remove tracks from trucks and equipment, leaving area as clean as prior to work on site
Informed today that SWMU 39 will not be shutting down next week as they need more time to play catch up

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | | 0 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 0 | |
| Estimated pounds shipped: today | 0 | |
| Trucks loaded: to date | 28 | TONS |
| estimated pounds shipped: to date | 1,404,020 | 702.01 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, July 31, 2009**

**Weather:**
Showers 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, back at gate 10 for backfill at SWMU 51
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Started backfill had to stop when rains started and became heavy, stopped at 1500 hours for weekend

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, August 03, 2009**

**Weather:**
Cloudy/Humid 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, back at FLFA finishing decon and service of equipment
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Pulling samples, per contract, for backfill material at JWB stockpile. 18 samples pulled, packaged and shipped to TestAmerica
Called of rent Hertz JD 200, they will pick up ASAP

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 13 | 130 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, August 04, 2009**

**Weather:**
Cloudy/Humid 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, back at FLFA finishing decon and service of equipment
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Completing clean up and servicing of equipment and vehicles today
Called off Shaw Cat 330 Excavator, equipment group will let sit until needed or demobilization of site

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 13 | 130 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, August 05, 2009**

**Weather:**
Cloudy/Humid 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, back at FLFA Hertz picking up JD 200 Excavator today
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Completing clean up and servicing of equipment and vehicles today
Regrading SWMU 51 after rains to repair damage, Hertz moved dozer there today

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 13 | 130 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, August 06, 2009**

**Weather:**
Cloudy/Humid 75 - 85 degress today

**Description of Work:**
Back at JWB stockpile of fill material have to resample 18 locations, first set of samples came into lab to warm to use
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Completing clean up and servicing of equipment and vehicles today
Shut site down completely for the next week, will restart Aug. 17, 2009

| Backfill SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 13 | 130 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | | |
| Shaw E & I | | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, August 17, 2009**

**Weather:**
Sunny/Hot 75 - 95 degress today

**Description of Work:**
Back at Gate 10, backfill trucks being checked into the site and Incinerator down at 0730
SWMU 39 accessable again to Shaw starting today
Escorting trucks into site with backfill, JWB has 8 trucks running today ( 84 loads)
Hertz delivered JD 544 Loader today and moved Dozer from SWMU 51 to SWMU 39

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 29 | 290 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Backfill SWMU 39 | Loads |
|---|---|
| Wednesday, June 10, 2009 | 79 |
| Monday, June 15, 2009 | 80 |
| Monday, June 22, 2009 | 91 |
| Tuesday, June 23, 2009 | 92 |
| Wednesday, June 24, 2009 | 96 |
| Thursday, June 25, 2009 | 123 |
| Friday, June 26, 2009 | 124 |
| Monday, June 29, 2009 | 124 |
| Tuesday, June 30, 2009 | 132 |
| Wednesday, July 01, 2009 | 120 |
| Thursday, July 02, 2009 | 110 |
| Tuesday, July 07, 2009 | 79 |
| Wednesday, July 08, 2009 | 96 |
| Thursday, July 09, 2009 | 120 |
| Monday, July 13, 2009 | 84 |
| Tuesday, July 14, 2009 | 71 |
| Wednesday, July 15, 2009 | 84 |
| Monday, August 17, 2009 | 84 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU39 backfill** | 1789 |

| Total Cyds |
|---|
| 790 |
| 800 |
| 910 |
| 920 |
| 960 |
| 1230 |
| 1240 |
| 1240 |
| 1320 |
| 1200 |
| 1100 |
| 790 |
| 960 |
| 1200 |
| 840 |
| 710 |
| 840 |
| 840 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 17890 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, August 18, 2009**

**Weather:**
Partly Sunny 75 - 85 degress today

**Description of Work:**
Crew at Gate 10, backfill trucks being checked into the site and tailgate held
Escorting trucks into site with backfill, JWB has 7 trucks running today (76 loads)
Finished with general fill today, continued moving top soil from onsite pile to ponds

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 backfill** | 29 | 290 |

| Backfill SWMU 39 | Loads |
|---|---|
| Wednesday, June 10, 2009 | 79 |
| Monday, June 15, 2009 | 80 |
| Monday, June 22, 2009 | 91 |
| Tuesday, June 23, 2009 | 92 |
| Wednesday, June 24, 2009 | 96 |
| Thursday, June 25, 2009 | 123 |
| Friday, June 26, 2009 | 124 |
| Monday, June 29, 2009 | 124 |
| Tuesday, June 30, 2009 | 132 |
| Wednesday, July 01, 2009 | 120 |
| Thursday, July 02, 2009 | 110 |
| Tuesday, July 07, 2009 | 79 |
| Wednesday, July 08, 2009 | 96 |
| Thursday, July 09, 2009 | 120 |
| Monday, July 13, 2009 | 84 |
| Tuesday, July 14, 2009 | 71 |
| Wednesday, July 15, 2009 | 84 |
| Monday, August 17, 2009 | 84 |
| Tuesday, August 18, 2009 | 76 |
| **Total SWMU39 backfill** | 1865 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 790 |
| 800 |
| 910 |
| 920 |
| 960 |
| 1230 |
| 1240 |
| 1240 |
| 1320 |
| 1200 |
| 1100 |
| 790 |
| 960 |
| 1200 |
| 840 |
| 710 |
| 840 |
| 840 |
| 760 |
| 18650 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, August 19, 2009**

**Weather:**
Partly Sunny 80 - 90 degress today

**Description of Work:**
Crew at Gate 10, Top Soil trucks being checked into the site and tailgate held
Escorting trucks into site with backfill, JWB has 6 trucks running today (34 loads)
Started importing Top Soil for SWMU 39 today and continued moving top soil from onsite pile also today

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, August 20, 2009**

**Weather:**
Cloudy/Showers today 80-90 degrees

**Description of Work:**
Crew at Gate 10, No Top Soil trucks today rains yesterday evening made are to wet
Cleaning roadway in front of Incinerator because of mud dragged out yesterday by trucks
Continued moving top soil from onsite pile also today and moved debris from SWMU 39 to SWMU 51 for disposal next week

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, August 21, 2009**

**Weather:**
Rain Showers today 80-90 degrees

**Description of Work:**
Crew at Gate 10, tailgate and work plans discussed
No Top Soil trucks today due to rains
Moving equipment from SWMU 39 to FLFA for Top Soil next week, Incinerator needs to run all next week

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, August 24, 2009**

**Weather:**
Cloudy/Cool today 55-70 degrees

**Description of Work:**
Crew at FLFA today, tailgate and work plans discussed
Top Soil trucks begin today at FLFA after lab results confirmed excavations all good
Escorting trucks in through shipping and receiving, Gate 15 today

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
SWMU 39 access denied today

**Verbal Instructions:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total FLFA Top Soil** | 57 |

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

| Total Cyds |
|---|
| 570 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 570 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, August 25, 2009**

**Weather:**
Clear/Sunny today 75 - 85 degrees

**Description of Work:**
Crew at FLFA today, tailgate and work plans discussed, safety audit by Scott Logan of Knoxville today
Top Soil brought into site yesterday being moved around slopes with loader and excavator
Waiting for Hertz to move dozer from SWMU 39 to allow final grading at FLFA

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
SWMU 39 access denied today

**Verbal Instructions:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total FLFA Top Soil** | 57 |

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

| Total Cyds |
|---|
| 570 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 570 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, August 26, 2009**

**Weather:**
Clear/Sunny today 80 - 90 degrees

**Description of Work:**
Crew at FLFA today, tailgate and work plans discussed for today
Top Soil brought into site being fine graded with dozer on slopes today
Moving JD 544 Loader to SWMU 51 this afternoon, cleaning roads and area from top soil placement

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
SWMU 39 access denied today

**Verbal Instructions:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total FLFA Top Soil** | 57 |

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

| Total Cyds |
|---|
| 570 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 570 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, August 27, 2009**

**Weather:**
Clear/Sunny today 80 - 90 degrees

**Description of Work:**
Crew at FLFA today, tailgate and work plans discussed for today
Top Soil brought into site being fine graded with dozer on slopes today
Moving JD 544 Loader to SWMU 51 this afternoon, cleaning roads and area from top soil placement

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
SWMU 39 access denied today

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, August 28, 2009**

**Weather:**
Cloudy/Showers today 70 - 80 degrees

**Description of Work:**
Crew at FLFA today, tailgate and work plans discussed for today
Completed final grading of slopes in preparation for hydro seeding
Decon of dozer being completed and transport back to SWMU 39 scheduled this afternoon

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 34 |

**Delays in Schedule:**
SWMU 39 access denied today

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 340 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, August 31, 2009**

**Weather:**
Cloudy/Cool today 60 - 70 degrees

**Description of Work:**
Crew at Gate 10 today JWB bring Top Soil for SWMU 39, tailgate and work plans discussed for today
Guard checking and signing ib trucks for entry to Arsenal
JWB running 8 trucks today with top soil ( 56 loads) and continued moving on site top soil pile

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 90 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 900 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, September 01, 2009**

**Weather:**
Cloudy/Cool today 60 - 70 degrees

**Description of Work:**
Crew atGate 10 today JWB bring Top Soil for SWMU 39, tailgate and work plans discussed for today
Guard checking and signing in trucks for entry to Arsenal
JWB running 8 trucks today with top soil ( 53 loads) and sent 7 loads of top soil to SWMU 51
Completed moving on site top soil pile into ponds

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 36 | 360 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| | 0 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 143 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 0 |
| 0 |
| 0 |
| 0 |
| |
| 1430 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, September 02, 2009**

**Weather:**
Cloudy/Cool today 50 - 70 degrees

**Description of Work:**
Crew atGate 10 today JWB bring Top Soil for SWMU 39, tailgate and work plans discussed for today
Guard checking and signing in trucks for entry to Arsenal
JWB running 8 trucks today with top soil ( 53 loads) and sent 9 loads of top soil to SWMU 51

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| | 0 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 196 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 0 |
| 0 |
| 0 |
| |
| 1960 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, September 03, 2009**

**Weather:**
Sunny/Cool today 50 - 75 degrees

**Description of Work:**
Crew atGate 10 today JWB bring Top Soil for SWMU 39, tailgate and work plans discussed for today
Guard checking and signing in trucks for entry to Arsenal, attended short meeting with Incinerator Supervisor about access
JWB running 10 trucks today with top soil (83 loads) and began repairing swale and roads
TOP SOIL complete at SWMU 39 and 51 and Hydro Seed set for September 11, 2009

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, September 04, 2009**

**Weather:**
Sunny/Clear today 70 - 80 degrees

**Description of Work:**
Crew atGate tailgate and work plans discussed for today, final grading at SWMU 39 and finish repairs to roadway
Guard checking in trucks for entry to Arsenal with crusher run stone to reapir road ( 2 loads)
JWB hauled away debris from SWMU 51 to recycler (fence, post and barb wire)

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| Contractors On Site: | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, September 08, 2009**
**Wednesday, September 09, 2009**
**Thursday, September 10, 2009**

**Weather:**
Partly Cloudy/ Warm today 70 - 80 degrees

**Description of Work:**
Spent these 3 days decontaminating equipment and vehicles and shipping off site
Securing all equipment and storing for SWMU 54 work to begin in the next few months
Gregory Seed on site Wednesday to check out three areas

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | 09/10/09 |
| JD 700 Dozer | 06/10/09 | Hertz | 09/10/09 |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | 09/02/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, September 11, 2009**

**Weather:**
Sunny/ Warm today 70 - 80 degrees

**Description of Work:**
Gregory Seed and Landscape on site to Hydro Seed all three area
SWMU 39 completed with one crew while second crew completed SWMU 51 and FLFA

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

**Verbal Instructions:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Steve Banks |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | 09/10/09 |
| JD 700 Dozer | 06/10/09 | Hertz | 09/10/09 |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | 09/02/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, September 14, 2009**
**to**
**Friday, September 18, 2009**

**Weather:**
Partly Cloudy/ Warm today 70 - 80 degrees

**Description of Work:**
Finalizing all decon and demobilization of equipment and vehicles from the site
Thursday pick up trucks demobilized from Radford and Friday remaining crew member demobilized
SITE WORK COMPLETED

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| Tuesday, September 01, 2009 | 7 | 70 |
| Wednesday, September 02, 2009 | 9 | 90 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 45 | 450 |

| Top Soil SWMU 39 | Loads |
|---|---|
| Wednesday, August 19, 2009 | 34 |
| Monday, August 31, 2009 | 56 |
| Tuesday, September 01, 2009 | 53 |
| Wednesday, September 02, 2009 | 53 |
| Thursday, September 03, 2009 | 83 |
| | 0 |
| | 0 |
| | |
| **Total SWMU 39 Top Soil** | 279 |

**Delays in Schedule:**
None

| Top Soil FLFA | Loads |
|---|---|
| Monday, August 24, 2009 | 57 |
| Thursday, August 27, 2009 | 12 |
| **Total FLFA Top Soil** | 69 |

**Verbal Instructions:**
None

| **Contractors On Site:** | | | |
|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | |
| | | | |
| USACE | W. Rathbun | | |
| | | | |
| **Equipment On Site:** | **Date On Site** | **Shaw/Rental** | **Demob from Site** |
| Cat 330 Excavator | 01/08/09 | Shaw | 08/04/09 |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | 09/17/09 |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | 09/17/09 |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 544 Loader | 08/17/09 | Hertz | 09/10/09 |
| JD 700 Dozer | 06/10/09 | Hertz | 09/10/09 |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | 09/02/09 |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

| Total Cyds |
|---|
| 340 |
| 560 |
| 530 |
| 530 |
| 830 |
| 0 |
| 0 |
| |
| 2790 |

| Total Cyds |
|---|
| 570 |
| 120 |
| 690 |

# Appendix F

## Site Safety Reports and Equipment Inspections

## Daily Safety Meeting

**Project Name:** Radford SWMU 51 **Date:** 2/16/09

**Project Number:** 123461 **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_X_ safety glasses, hard hat, safety boots
_X_ site safety plan review and location
_X_ equipment and machinery familiarization
__ employee Right-To-Know/MSDS location
_X_ open pits, excavations, and site hazards
_X_ vehicle safety and driving/road conditions
_X_ portable tool safety and awareness
_X_ overhead utility locations and clearance
_X_ first aid, safety, and PPE location
__ sharp object, rebar, and scrap metal hazards
_X_ safety is everyone's responsibility
__ latex gloves inner/nitrile gloves outer
_X_ excavation/trenching inspections/documentation
__ full face respirators with proper cartridges
_X_ upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_ work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_ slips, trips, and falls
_X_ directions to hospital
__ anticipated visitors
__ electrical ground fault
_X_ public safety and fences
_X_ excavator swing and loading
_X_ orderly site and housekeeping
_X_ smoking in designated areas
_X_ leather gloves for protection
__ effects of the night before
__ vibration related injuries
_X_ fire extinguisher locations
_X_ eye wash station locations
_X_ decontamination procedures

_X_ daily work scope
_x_ emergency protocol
__ parking and laydown
_X_ hot work permits
_X_ strains and sprains
_X_ noise hazards
_X_ no horseplay
_X_ heat and cold stress
_X_ backing up hazards
_X_ accidents are costly
_X_ dust and vapor control
_X_ refueling procedures
__ confined space entry
__ flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Air monitoring will be conducted during excavation and loading operations

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Steve Kritak | Steve Kritak | Shaw |
| Stephen Banks | Stephen Banks | |
| Greg Griswold | | Shaw |
| Chester J. Bopp | Chester J. Bopp | Shaw |

# JOB SAFETY ANALYSIS

DATE: 2/16/09
JOB#: 123461
PERMIT#:
ISSUED BY: N/A

Shaw The Shaw Group Inc.

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Roadway

Wind Direction: N/A

Evacuation Route: SAME AS entry from gate 10

Assembly Point: Gate 10

Supervisor of Work: S. KRITAK

JSA Prepared By: S. Kritak

Are other crews in area NO

| | | |
|---|---|---|
| New: | ✓ | |
| Revised: | | |

**Job Task**
(What are You Doing)

Preparing Area for excavation & loadout of Trucks

**Site Cleanup**

Keep clean every day

**Potential Hazards**

Excavation Safety
Truck Traffic
Vehicle Traffic while escorting to gate

**Recommended Action or Procedure**

**Audit the Job**
Audit Time:

**Supervisors Comments**

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

Shaw The Shaw Group Inc.

S. KRITAK / S. BANKS

**SUPERVISION/FOREMAN** _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ✓ Required
- ___ Cold Work
- ___ Hot Work
- ✓ Entry Permit (ATK)
- ✓ All Conditions Met
- ✓ Signed Off When Complete
- ___ Other

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ✓ Other WATCH FOR EXPLOSIVE TRANSPORT TRUCKS

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** Feb. 17, 2009

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Begin loading trucks today Air Monitoring to begin - Escort every truck in & out.

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | S Kritak | Shaw |
| S. BANKS | Steve Banks | Shaw |
| GREG BRISWOLD | | Shaw |
| CHESTER J. BRYSON | Chester J Bryson | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL level D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: gate 10

Wind Direction:

Evacuation Route: known trk. route

Assembly Point: gate 10

Supervisor of Work: S Kritak

JSA Prepared By: S. Kritak

Are other crews in area

New: X

Revised:

**Job Task**
(What are You Doing)

loading trucks - direct load
Air monitoring - dust and OV
~~Esc~~ Escort trucks in & out of site

**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

TRAFFIC
Equip. operations
EXCAVATION safety
Cold Stress

**Supervisors Comments**

**Recommended Action or Procedure**

Follow SOP's established by CO.
Follow RADFORD RULES & ALL
TRAFFIC REGULATIONS

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ✓ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 02/25/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Continue Operations as same as last 2 weeks, Excavate, Load out and Escort to/from Gate

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S Kritak | S Kritak | Shaw |
| J Banks | J Banks | Shaw |
| Greg Griswold | | Shaw |
| Chet Bartlett Sr | Chet Bartlett Sr | SHAW |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: GATE 10

Wind Direction: —

Evacuation Route:
GATE 10 to Site

Assembly Point:
GATE 10

Supervisor of Work: S. KRITAK

JSA Prepared By: S. Kritak

Are other crews in area NO

New: X

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

EXCAVATION OF WASTE AT SWMU 51
LOAD OUT OF WASTE INTO TRUCKS
ESCORT TRUCK TO/FROM SITE TO GATE 10
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EXCAVATION SAFETY / CONFINED SPACE
SAFE EQUIPMENT OPERATIONS
TRAFFIC RULES / REGULATIONS

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SITE RULES / REGULATIONS
FOLLOW ALL SHAW SOP'S FOR
EQUIP. OPS.
EXCAVATION SAFETY

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

# JOB SAFETY ANALYSIS

Shaw The Shaw Group Inc.

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 02/26/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Continue following Safe Work Practices and all relevant RAAP & SHAW SOP's for Work.

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Kritak | S Kritak | Shaw |
| S. Banks | S Banks | Shaw |
| C. Brewer | C Brewer | Shaw |
| Greg Gatewood | Greg Gatewood | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: GATE 10
Wind Direction: N/A
Evacuation Route: Transportation Route
Assembly Point: GATE 10

Supervisor of Work: S. Kritak
JSA Prepared By: Same
Are other crews in area No

| | |
|---|---|
| New: | X |
| Revised: | |

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

EXCAVATE CONTAMINATED SOILS
ESCORT TRUCKS INTO/OUT OF SITE
TAKE POST EX. SAMPLES
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EQUIPMENT OPERATIONS
TRUCK/TRAFFIC OPERATIONS
EXCAVATION SAFETY

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SOP's AND RADFORD RULES WHILE ON SITE

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 2/27/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Continue work as we have, keep up good safe work practices & following SOP's

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | | Shaw |
| C. BETTS JR | | Shaw |
| LEE GRISWOLD | | Shaw |
| S. BANKS | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: —
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Kuttak
JSA Prepared By: Same
Are other crews in area No

| | |
|---|---|
| New: | ✓ |
| Revised: | |

**Job Task**
(What are You Doing)

ESCORT TRUCKS IN & OUT OF SITE
LOADOUT OF MATERIAL INTO TRUCKS
EXCAVATE REMAINING WASTE
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

TRAFFIC RULES / ESCORTING
EXCAVATION SAFETY / CONFINED SPACE
EQUIPMENT OPERATIONS
KEEP UP HOUSEKEEPING
CONTINUE AIR MONITORING

**Supervisors Comments**

**Recommended Action or Procedure**

JUST CONTINUE TO FOLLOW SOP's AND RADFORD RULES

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** March 3, 2009

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Xtremely Cold today, don't spend to much time outside is Wind, take frequent breaks

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | S Kritak | Shaw |
| S. BANKS | S Banks | Shaw |
| GREG GRISWOLD | | Shaw |
| C BRENNER | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route: Transport Route

Assembly Point: Gate 10

Supervisor of Work: S. Kuttak

JSA Prepared By: Same

Are other crews in area

New: X

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

Benching back excavation

**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Equipment Operations
Excavation Safety
Cold Stress
Slip Trip Fall hazards

**Supervisors Comments**

**Recommended Action or Procedure**

Take frequent breaks in truck, keep truck running and heated.
Follow SOP's for Excavation & Equipment Ops.

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 03/04/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Cold Stress, extremely cold this A.M., Keep frequent breaks to warm up

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | | Shaw |
| S. BANKS | | Shaw |
| GREG GRISWOLD | | Shaw |
| Chastain T. Bethea | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project): ~~SEA 1 WEST~~ Radford Arsenal - SWMU 51

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: S. Kizitak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: S Kizitak |
| | Wind Direction: N/A | Are other crews in area No |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: GATE 10 | New: X<br>Revised: |

**Job Task**
(What are You Doing)

Excavation of Contaminated Soils
Decon of Excavator bucket
Post Ex. Samples of excavation (taken by machine)
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Equipment Operations
Excavation Safety
Cold Stress
Slip trip Fall

**Supervisors Comments**

**Recommended Action or Procedure**

Follow All SOP's and Radford Policies
KEEP TAKING FREQUENT breaks to warm up
Watch Slippery, uneven Surfaces

**Supervisor's Initials:**

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ✓ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ✓ Ladder (~~Tied off~~ Step ladder)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ✓ Other Cold Stress

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: Stay at least 50' From Amo Magazine Bldg.

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/5/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** loading trucks today(8), escort in/out of Gate 10, loadout remaining sludge/soil mix

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | S Kritak | Shaw |
| JEFF GRISWOLD | | Shaw |
| STEPHEN BANKS | Stephen Banks | Shaw |
| Chester Brush | Chester Brush | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Keitah
JSA Prepared By: Same
Are other crews in area NO

| | | |
|---|---|---|
| New: | X | |
| Revised: | | |

**Job Task**
(What are You Doing)

Escort trucks in and out Gate 10
Load trucks at SWMU 51
Clean up ~~Site~~ Excavator
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Equip Operations
Excavation Safety
Traffic Rules

**Supervisors Comments**

**Recommended Action or Procedure**

Follow all SOP's for Excavation and Equipment Operations

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | [signatures] | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: 3/5/09
JOB#: 123461
PERMIT#:
ISSUED BY: [illegible]

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/6/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Clean up site, clean up roadway, prepare to secure for weekend.

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | SKritak | Shaw |
| J. BATES | J Bates | SHAW |
| GREG GREENWOOD | | Shaw |
| Chester J. Benson | Chester J Benson | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: follow Transport route
Assembly Point:
Gate 10

Supervisor of Work: S. Kozitak
JSA Prepared By: Same
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Roadway Cleanup
**Site Cleanup**
Secure for Wkend.

**Audit the Job**
Audit Time:

**Potential Hazards**

Truck traffic on roadway
Equipment Operations
Slip Trip Fall

**Supervisors Comments**

**Recommended Action or Procedure**

Follow Safe Work Practices

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/9/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** loading remaining 6 loads of waste

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | SKritak | Shaw |
| JEL GRISWOLD | JT Griswold | Shaw |
| STEPHEN BANKS | Stephen Banks | Shaw |
| CHESTER J. BAILEY | Chester J Bailey | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: SKRITAK
JSA Prepared By: Same
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Escort Trucks in/out SITE
Loadout Waste/Equip. Ops.
Traffic Safety
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip Trip Fall
Traffic
Equipment Operation Safety
Excavation Safety

**Supervisors Comments**

**Recommended Action or Procedure**

Follow all SOP's for Excavation
Follow Radford Rules / Escort drivers
Not lighters / matches or open flames

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/10/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Clean up Excavator, Take remaining Post Excavation samples and secure site

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Kritak | S Kritak | Shaw |
| Stephen Banks | Stephen Banks | Shaw |
| Greg Gerrard | Greg Gerrard | Shaw |
| Chester J. Bednar | Chester J. Bednar | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: 3/10/09
JOB#: 123461
PERMIT#:
ISSUED BY: N/A

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Kritac
JSA Prepared By: SKritac
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Clean up Excavation Area
Pull last Ex. Samples
Ship Samples to Lab
Site Cleanup

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip Trip Fall
Equipment Ops.

**Supervisors Comments**

**Recommended Action or Procedure**

Follow SOPs during work activities.

**Supervisor's Initials:**

| Crew Name Signatures: | |
|---|---|
| JSA Completed at Tailgate Safety Meeting | |

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** March 16, 17, 18, 19 & 20, 2009 WEEKLY TAILGATE (Reviewed daily)

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Site Clean up and Prep for loading additional 6 trucks on the 20th Also prep being done to start SWMU 39 3/24/09

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Bowers | Stephen Bowers | Shaw |
| Chester J. Bowser | Chester J. Bowser | Shaw |
| Greg Griswold | Greg Griswold | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. ICRIMAL
JSA Prepared By: SAME
Are other crews in area No

| | |
|---|---|
| New: | X |
| Revised: | |

**Job Task**
(What are You Doing)

Prep for Additional Excavating / Loading
Prep for SWMU 39 (Clearing / Grubbing)
Escort / Route Procedures
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EQUIP operations
Chain Saw Safety Reviewed
TRAFFIC / Explosive hauling Vehicles

**Supervisors Comments**

**Recommended Action or Procedure**

Follow all SOP's and EFMAP Rules

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- ___
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** March 30, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Cutting of trees and chipping operations, equipment operations moving trees and branches

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| R. Trahan | | Shaw |
| R. Lacson | | SHAW |
| R. McBride | | SHAW |
| | | |
| | | |

Instructions: Conduct a daily safety meeting prior to beginning each day's site activities. Complete form, obtain signatures, and file with the Daily Summary. Follow-up on any noted items and document resolution of any action items.

TASK TITLE: PERFORMED BY:

| PRINT NAME | SIGNATURE | DATE |
|---|---|---|
| | | |
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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: |
|---|---|---|
| LEVEL | Safe Haven: | JSA Prepared By: |
| | Wind Direction: | Are other crews in area |
| Pre-Job Preparation | Evacuation Route: | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: | New: / Revised: |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Site Cleanup** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** March 31, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Cutting of trees and chipping operations, equipment operations moving trees and branches

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Brooks | | Shaw |
| Chester J Brewer | | Shaw |
| Greg Griswold | | Shaw |
| [illegible] | | Shaw |
| R. Lacson | | Shaw |
| Randy McBride | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Transport Route

Assembly Point:
Gate 10

Supervisor of Work: S. KRITAK

JSA Prepared By: S. KRITAK

Are other crews in area

New: ✓

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

Cutting Trees down in Ponds
Trimming branches
Chipping branches & small stumps

**Site Cleanup**

Transpart trees & branches using BOBCAT and Loader

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip Trip Fall
Chain Saw Safety
Chipper Safety
Equipment Operations

**Supervisors Comments**

**Recommended Action or Procedure**

Follow SOP's and PFMAP Policies

Notify Control Room whenever entering (A.M.) and Leaving (P.M.)

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other Chaps

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- N/A Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other

**HAZARDS/CHEMICALS**
- N/A Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- N/A Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- N/A Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 2, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Cutting of trees and chipping operations, equipment operations moving trees and branches

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| RIVRAHAN | | SHAW |
| R. Lacson | | Shaw |
| Randy McBroom | | SHAW |
| Chester J. Branch | | SHAW |
| Stephen Banks | | SHAW |
| Glee Ekiwood | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Cutting trees and dragging to prep area | |
| Removing branches and cutting trunks into 8' sections | |
| Placing trunks into wooded area using bobcat | |
| Chipping branches and sections of trees under 12" | |
| Site clean up | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall | |
| Equipment Operations-Loader and skid steer | |
| Chain Saw Operations | |
| Chipper Operations | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment | |
| Follow all RFAAP safety rules | |
| Follow all Shaw SOP's | |

| Crew Name Signatures: | R. Tolar<br>R. Lacson | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51** /SWMU 39 **Date:** April 6, 2009

**Project Number: 123461** _____ **Presented by:** Steve Kritak _____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet. BACKFILL OF AREA 51 W/ ON SITE SPOILS CONTINUE CHIPPING & CLEARING AT AREA 39

**Discussion/Comments/Follow-up Actions:** CONTINUE WORKING AS A TEAM AND FOLLOW ALL SOP's & RADFORD REGULATIONS

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| CHRIS GRISWOLD | | Shaw |
| STEPHEN BANKS | | Shaw |
| K. TRAHAN | | Shaw |
| K. LACSON | | Shaw |
| CHESTER J. BRUNIN | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: GATE 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: GATE 10

Supervisor of Work: S. KRITSAK
JSA Prepared By: SAME
Are other crews in area: No

New: X
Revised:

**Job Task**
(What are You Doing)

BACKFILL SWMU 51 WITH SEGREGATED SPOILS MATERIAL
COMPACT MATERIAL W/ BUCKET OF CAT 330

**Site Cleanup**

CONTINUE MOVING TREES TO CHIPPING AREA FROM PONDS
STRIP BRANCHES AND PUT THROUGH CHIPPER
SPREAD TRUNKS AND MULCH IN WOODED AREAS

**Potential Hazards**

EQUIPMENT OPERATIONS
SHARP / CUTTING HAZARDS
SLIP TRIP FALL ; UNEVEN SURFACES
HEAVY LIFTING

**Recommended Action or Procedure**

FOLLOW ALL SHAW SOP'S
FOLLOW ALL RADFORD POLICY ; PROCEDURES

**Audit the Job**
Audit Time:

**Supervisors Comments**

**Supervisor's Initials:**

**Crew Name Signatures:**

JSA Completed at Tailgate Safety Meeting

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work SUMUSI
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51 & 39** **Date:** April 7, 2009

**Project Number: 123461** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** BACKFILL AT SWMU 51 to only 15' bgs. ~~Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.~~ SWMU 39 prepare for Excavation of Ponds and loading into trucks. Prepare ramp into 1st Pond.

**Discussion/Comments/Follow-up Actions:** Extremely windy/cold today watch for slip trip fall hazards and check in w/control room prior to entry into SWMU 39

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| STEPHEN BANKS | Stephen Banks | Shaw |
| Chester J Barnes | Chester J Barnes | Shaw |
| Greg Grigsby | Greg Grigsby | Shaw |
| R Tatum | R Tatum | Shaw |
| R Lacson | R Lacson | shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: 4/7/09
JOB#:
PERMIT#: 123461
ISSUED BY:

**Location of Job** RFAAP - SWMU 39 and SWMU 51
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Kratak
JSA Prepared By: Same
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Prepare entry ramp into SWMU 39 pond A
BACKFILL AT SWMU 51 (10 15' lifts)
Compact at SWMU 51 w/ bucket (only)

**Site Cleanup**

* Work out details of Excavating windrows at ponds.

**Potential Hazards**

Equipment operations
Excavation Safety
Traffic through Plant (Right of way to Explosive Trucks and escorted Vehicles)
Slip Trip Fall
Cold Stress

**Recommended Action or Procedure**

Follow Standard Shaw SOP's
Follow RFAAP Safety Policies

**Audit the Job**
Audit Time:

**Supervisors Comments**

**Supervisor's Initials:**

| Crew Name Signatures: | |
|---|---|
| JSA Completed at Tailgate Safety Meeting | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ✓ Hot Work (Sum 39)
- ✓ Entry Permit (both 51 & 39)
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- ___
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

### Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51 & 39** **Date:**

**Project Number: 123461** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** [redacted]

No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives a[redacted]

[redacted] Excavation at SWMU 39 of Lead Contaminated Soils. Finish removal of fence posts and breaking of Concrete.

**Discussion/Comments/Follow-up Actions:** Check in with Control Room prior to entry into the Incinerator Area

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brinson | | SHAW |
| Stephen Banks | | SHAW |
| Greg Griswold | | SHAW |
| Jeff Hillebrand | | SHAW |
| Randy McBride | | SHAW |
| R. Trahan | | SHAW |
| R. Laesen | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: GATE 10

Supervisor of Work: S. KRITAIC
JSA Prepared By: Same
Are other crews in area None

New: X
Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

EXCAVATE LEAD SOILS TO 1 FOOT BGS
STOCKPILE SOILS IN "ROWS" NOT PILES
SAMPLE/TEST SUBGRADE W/ XRF
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EQUIPMENT OPERATIONS
SLIP TRIP, FALL
HEAVY LIFTING
EXCAVATION SAFETY
OBEY TRAFFIC REGULATIONS ON BASE

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SHAW SOP's
FOLLOW RFAAP RULES & REGULATIONS.

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- X Heavy Objects
- X Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- X Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 9, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures

_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| K. Trahan | K. Trahan | Shaw |
| R. Lacson | R. L | Shaw |
| Chester J. Brinson | Chester J. Brinson | SHAW |
| Randy McMinor | | SHAW |
| Jeff Hilkbrand | | SHAW |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 13, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Benson | | SHAW |
| Raddy Lawson | | Shaw |
| Jeff Hilkbrand | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
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- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
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- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** April 15, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| R Larson | | Shaw |
| J. Hiltbrand | | Shaw |
| C. Brinser | | Shaw |
| Gene Gerwood | | Shaw |
| | | |

IL0001357236

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 16, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks | | Shaw |
| Stephen Hillebrand | | Shaw |
| Chester Brinson | | Shaw |
| R. Lacson | | Shaw |
| Eric Griswold | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 17, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Charles J. Branson | | Shaw |
| Greg Gibbons | | Shaw |
| R. Larson | | Shaw |
| Steve Barker | | Shaw |
| Jeff Nellenbach | | Shaw |

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# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 20, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| R Lacson | | Shaw |
| C. Brown | | Shaw |
| S. Banks | | Shaw |
| Greg Griswold | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
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- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
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- ___ Load Chart
- ___ Angle
- ___ Crane
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- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 21, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. BANKS | | Shaw |
| Greg Gasswood | | Shaw |
| R Lacson | | shaw |
| C. BOINSER | | SHAW |
| J. Nillebrand | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** 4/22/09

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Branson | | Shaw |
| S. Banks | | Shaw |
| Otis Grimsley | | Shaw |
| R. Lacson | | Shaw |
| J. Hildebrand | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br><br>LEVEL | **Safety Access/ Location**<br><br>Safe Haven: Gate 10<br><br>Wind Direction: N/A<br><br>Evacuation Route:<br>Follow Transport Route<br><br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br><br>JSA Prepared By: Same<br><br>Are other crews in area RFAAP Production crews<br><br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br><br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | |
|---|---|
| **JSA Completed at Tailgate Safety Meeting** | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 23, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. BANKS | | SHAW |
| C. BRINSON | | SHAW |
| J. Hilkbrand | | Shaw |
| R Lacson | | Shaw |
| Steve Griswold | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** 4/24/09

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. Brinson | | Shaw |
| R. Lacson | | Shaw |
| B. Griswold | | Shaw |
| S. Banks | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
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| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
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- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
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**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
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- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
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- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
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- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

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- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
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- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 27, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| J. Hilliard | | Shaw |
| C. Brinson | | Shaw |
| R. Lacson | | Shaw |
| G. Griswold | | Shaw |
| S. Banks | | Shaw |

982

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 28, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. Brinson | | Shaw |
| S. Banks | | Shaw |
| R. Lacson | | Shaw |
| G. Growald | | Shaw |
| J. Hillebrand | | Shaw |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** 4/29/09

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. Branson | | SHAW |
| J. Hilebrand | | Shaw |
| J. Banks | | SHAW |
| R. Larson | | shaw |
| G. Gearwood | | Shaw |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** May 5, 2009

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:**_____

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks<br>Chester J. Banks | Stephen Banks<br>Chester J. Banks | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 51

Required PPE:

LEVEL D

**Pre-Job Preparation**

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: GATE 10
Wind Direction: N/A
Evacuation Route: follow Transport Route
Assembly Point: GATE 10

Supervisor of Work: S. Krifka
JSA Prepared By: S Krifka
Are other crews in area NO

New: X
Revised:

**Job Task**
(What are You Doing)

ESCORT TRUCKS INTO S/TE
LOAD 2 TRUCKS
ESCORT OUT OF SITE

**Site Cleanup**

SAMPLE SOIL - SWMU 51

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip, Trip, Fall
TRAFFIC SAFETY
EQUIPMENT OPERATIONS

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SHAW SOP's & RADFORD POLICIES

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal**____ **Date:** May 11, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Britton | | Shaw |
| Stephen Brooks | | Shaw |
| Greg Gelwood | | Shaw |
| Jeff Hilliard | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: May 11, 2009
JOB#: 123461
PERMIT#: N/A
ISSUED BY: S. Kritak

| | | |
|---|---|---|
| **Location of Job** (Unit/Location on Project): ~~SEAD WEST~~ SWMU 39 - RFAAP | | |
| Required PPE: LEVEL | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
| | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal**___ **Date:** May 13, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Brooks | | Shaw |
| C. Brinser | | Shaw |
| Greg Greenwood | | Shaw |
| J. Hilkbrand | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~SITE WEST~~ SWMU 39

| | | |
|---|---|---|
| Required PPE:<br>LEVEL D | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
| | Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** May 15, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Bayis | | SHaw |
| J. Hillebran | | Shaw |
| C. Bryson | | Shaw |
| Greg Gilliwood | | Shaw. |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

| | | |
|---|---|---|
| **Location of Job** (Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39 | | |
| Required PPE:<br>LEVEL D | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
| | Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews<br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task** (What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** May 18, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| G. Bertasso | | Shaw |
| Stephan Banks | | Shaw |
| Greg Grinnup | | Shaw |
| Jeff Hilbrand | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal**___ **Date:** May 19, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Banks | | Shaw |
| C. Brinser | | Shaw |
| Bill Griswold | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** May 20, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. BRINSON | | Shaw |
| S. Banks | | Shaw |
| Greg Gregory | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br><br>LEVEL | **Safety Access/ Location**<br><br>Safe Haven: Gate 10<br><br>Wind Direction: N/A<br><br>Evacuation Route:<br>Follow Transport Route<br><br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br><br>JSA Prepared By: Same<br><br>Are other crews in area RFAAP Production crews<br><br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br><br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| | | |
|---|---|---|
| **Crew Name Signatures:** | | |
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
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- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 1 & 2, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banics | | Shaw |
| | | Shaw |
| Bob Griswold | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br>LEVEL | **Safety Access/ Location**<br>Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route:<br>Follow Transport Route<br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br>JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews<br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
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- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
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- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
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- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
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- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
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**LIFTING**
- ___ Forklift
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- ___ Angle
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- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
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- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
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- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
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- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** June 3, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 51/39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chet Brinser | | Shaw |
| Stephen Banks | | Shaw |
| Bob Gerwood | | Shaw |
| Jeff Hillebrand | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 29, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Jeff Hibbard | | Shaw |
| S. Banks | | Shaw |
| C Gilsworth | | Shaw |
| C. Brinser | Chet Brinser | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 4, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 5 ~~39~~, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| CHET BETTSER | | Shaw |
| Stephen Banks | | Shaw |
| Greg Gremwood | | Shaw |
| Jeff Nelson | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br>LEVEL | **Safety Access/ Location**<br>Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route:<br>Follow Transport Route<br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br>JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews<br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal** **Date:** June 8, 2009

**Project Number: 123461.** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Excavation and load out of non hazardous soils from the Former Lead Furnace Area for shipment to the landfill. Sampling of soils and analysis using XRF and regrading of area when completed.

**Discussion/Comments/Follow-up Actions:** Follow all RFAAP safety protocols trucks will be weighed at scales behind shipping and receiving by Shaw.

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| CHET BRINSON | | Shaw |
| CRAIG GRISWOLD | | Shaw |
| Jeff Hilderbrand | | Shaw |
| STEPHEN BANKS | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):FLFA

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of Soils at FLFA** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Regrading of areas when completed** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 11, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | |
| Stephen Banks | | |
| Greg Gatewood | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | |
|---|---|
| New: | XXXX |
| Revised: | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** 6/12/09

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | Shaw |
| Greg Bridgewood | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 22, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brinson | | Shaw |
| Gene Garwood | | Shaw |
| | | |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Excavation of sediment ponds | |
| Stockpiling of material | |
| Sampling of soils using XRF | |
| Backfill and compaction of ponds | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall | |
| Equipment Operations-Loader and Excavator | |
| Traffic during Escorting of disposal trucks | |
| Heavy lifting | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment | |
| Follow all RFAAP safety rules | |
| Follow all Shaw SOP's | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** June 23, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Christopher J. Bellasai | | Shaw |
| Greg Gregorio | | Shaw |
| | | |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

| **Location of Job** (Unit/Location on Project):STA 1 WEST | | |
|---|---|---|
| Required PPE:<br><br>LEVEL | **Safety Access/ Location**<br><br>Safe Haven: Gate 10<br><br>Wind Direction: N/A<br><br>Evacuation Route: Follow Transport Route<br><br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br><br>JSA Prepared By: Same<br><br>Are other crews in area RFAAP Production crews<br><br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br><br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task** (What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds**<br>**Stockpiling of material**<br>**Sampling of soils using XRF**<br>**Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall**<br>**Equipment Operations-Loader and Excavator**<br>**Traffic during Escorting of disposal trucks**<br>**Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment**<br>**Follow all RFAAP safety rules**<br>**Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 24, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester S. Bryson | | Shaw |
| J. Wilson | | Shaw |
| S. Banks | | Shaw |
| Greg Bryson | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** June 30, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Jeff Hildebrand | | Shaw |
| Chester S. Bottser | | Shaw |
| S. Banks | | Shaw |
| Greg Gaylord | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39 (BACKFILL)

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 2, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Greg Gerwood | | Shaw |
| S. Banks | | Shaw |
| Chet Bretsch | | Shaw |
| Jeff Nilsbrand | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** July 7, 2009

**Project Number: 123461.24000002** _____ **Presented by:** Steve Kritak _____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** _____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Bruns | | Shaw |
| Greg Bridgewood | | Shaw |
| Stephen Burke | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** July 9, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** and traffic regulations.

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Bronson | | Shaw |
| Stephen Bandis | | Shaw |
| Bud Brown | | Shaw |
| | | |
| | | |

982

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 13, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Gale Gatewood | | Shaw |
| Chester Jefferson | | Shaw |
| Stephen Bradley | | Shaw |
| | | |
| | | |

980

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 21, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewster | | Shaw |
| Greg Greenwood | | Shaw |
| Stephen Brady | | Shaw |
| | | |
| | | |

999

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate | | |
| Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** July 22, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewer | | Shaw |
| Greg Gaskamp | | Shaw |
| S. Banks | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

997

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 23, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~29~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewer | | Shaw |
| Greg Gatewood | | Shaw |
| S. Banks | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 24, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL >10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Beaver | | Shaw |
| Greg Gragwood | | Shaw |
| S. Banks | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 29, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of ~~lead~~ contaminated soils ~~impounds~~ located at SWMU 51 ~~29~~, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete** BACKFILL ONLY

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Benson | | Shaw |
| Greg Greenwood | | Shaw |
| Steven Banks | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** 7-15-09

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewer | | S |
| Stephen Jones | | S |
| Greg Brewer | | S |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Excavation of sediment ponds<br>Stockpiling of material<br>Sampling of soils using XRF<br>Backfill and compaction of ponds | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall<br>Equipment Operations-Loader and Excavator<br>Traffic during Escorting of disposal trucks<br>Heavy lifting | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment<br>Follow all RFAAP safety rules<br>Follow all Shaw SOP's | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** July 1, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Jeff Hilliard | | Shaw |
| J. Burton | | Shaw |
| C. Ellsworth | | Shaw |
| C. Brewster | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 26, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | Shaw |
| Stephen Banks | | Shaw |
| Jeff Hilliard | | Shaw |
| Greg Griswold | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** May 21, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| L. Brinson | | Shaw |
| S. Banks | | Shaw |
| Greg Griswold | | Shaw |
| | | |
| | | |

982

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** July 28, 2009

**Project Number: 123461.~~24000002~~** 62000002 ___ **Presented by:** Steve Kritak ___

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL >10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~38~~, loading material into trucks for disposal, backfill and compaction of ~~pond~~s after confirmatory sampling is complete**

EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** ___

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Bayes | | Shaw |
| J. Alleman-J | | Shaw |
| Greg Griswold | | Shaw |
| Cheri Brunser | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** July 27, 2009

**Project Number: 123461.~~24000002~~ 62000002** ___ **Presented by:** Steve Kritak ___

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**

EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** ___

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks | | Shaw |
| J. Hellebrand | | Shaw |
| Gene Gregwood | | Shaw |
| Chet Brinser | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** Aug. 17, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | SHAW |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** Aug. 18, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Benser | | Shaw |
| Steven Banks | | Shaw |
| | | |
| | | |
| | | |

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

Shaw Group Inc.

**ion of Job**
(Location on Project):STA 1 WEST

quired PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | |
|---|---|
| New: | XXXX |
| Revised: | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate | | |
| Safety Meeting | | |

# AFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

_____ _____

ı apply to the job, then review with the work crew.

**(PPE)**

_____ X Type of Gloves
_____ X Composition of Gloves
_____ Special Purpose Gloves
_____ Tyvek Suit
_____ Acid Suit /Slicker Suit
_____ Rubber Boots
_____ Mono Goggles (vented/non-vented)
_____ X Face Shield
_____ Respirator
_____ Fresh Air
_____ X Ear Protection
_____ Safety Harness
_____ Burning Goggles
_____ X Other _____

**TOOLS**

_____ X Current Inspection
_____ X Proper Tools for the Job
_____ X Good Tool Condition
_____ X Qualifications
_____ Other _____

**EMERGENCY EQUIPMENT**

_____ X Fire Extinguishers
_____ Safety Shower
_____ X Evacuation Route
_____ Other _____

**ACCESS**

_____ Scaffold (properly inspected)
_____ Ladder (Tied off)
_____ Manlift
_____ Personnel Basket (inspected & approved)
_____ Operator Training
_____ Special Provisions
_____ Other

**WELDING**

_____ Flashburns
_____ Combustibles
_____ Spark Containment
_____ Shields
_____ Grounding
_____ Water Hose
_____ Fire Extinguisher
_____ Fire Blanket
_____ Fire Watch
_____ Sewer Covers
_____ Other _____

**OVERHEAD WORK**

_____ X Barricades
_____ Signs
_____ Hole Cover
_____ Handrail
_____ Other _____

**ELECTRICAL**

_____ Locked & Tagged out
_____ Try Start/Stop Switch
_____ X GFCI Test
_____ X Assured Grounding
_____ X Extension Cord Inspection
_____ Other _____

**LIFTING**

_____ Forklift
_____ Cherry Picker
_____ Load Chart
_____ Angle
_____ Crane
_____ Chainfall
_____ X Proper Rigging Practices
_____ X Manual Lifting
_____ X Condition of Equipment
_____ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**

_____ Electrical Shock
_____ Heat Stress
_____ Heavy Objects
_____ Hot/Cold Surf. Or Mat.
_____ Inadequate Lighting
_____ Line Breaking
_____ X Noise
_____ Poor Access/Egress
_____ Sharp Objects
_____ Other _____

**HAZARDS/CHEMICALS**

_____ Chemical Burn Shin/Eyes
_____ Flammable
_____ Ingestion
_____ Inhalation
_____ Skin Contamination

**HAZARDS/BODY**

_____ Fall Potential
_____ Pinch Points
_____ Slip-Trip Potential
_____ Other _____

**OTHER WORK IN AREA**

_____ Others Working Overhead
_____ Type Work Others Doing
_____ PPE Due to Other Work
_____ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** Aug. 19, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Bethusen | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** Aug. 20, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Christopher J. Bowser | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** August 24, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils [redacted] located at [redacted] FLFA loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Barns | | Shaw |
| Chester J. Brinsen | | Shaw |
| Steven Kritak | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

| | | | |
|---|---|---|---|
| **Location of Job** (Unit/Location on Project): ~~[illegible]~~ FLFA | | | |
| Required PPE: LEVEL D | **Safety Access/ Location** | Supervisor of Work: Steve Kritak | |
| | Safe Haven: Gate 10 | JSA Prepared By: Same | |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews | |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | Revised: | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** August 25, 2009

**Project Number: 123461.24000002** ___ **Presented by:** Steve Kritak ___

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures

_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils [redacted] located at [redacted] FLFA; loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** ___

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks | | Shaw |
| Chester J. Brinser | | Shaw |
| Steven Kritak | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~[redacted]~~ FLFA

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Excavation of sediment ponds | |
| Stockpiling of material | |
| Sampling of soils using XRF | |
| Backfill and compaction of ponds | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall | |
| Equipment Operations-Loader and Excavator | |
| Traffic during Escorting of disposal trucks | |
| Heavy lifting | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment | |
| Follow all RFAAP safety rules | |
| Follow all Shaw SOP's | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** Aug. 31, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 2/18/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Rainy weather, slippery surfaces, Truck traffic & Equipment Operations

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | Skritak | Shaw |
| S. BANKS | Steve Banks | Shaw |
| CHET BRAPSON | Chet Brapson | Shaw |
| GREG GRISWOLD | Greg Griswold | Shaw |
| | | |



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

| | | | |
|---|---|---|---|
| UNIT NO: | 100600 | WEEK ENDING: | 1/9/09 |
| UNIT MILES: | 97151 | CURRENT JOB NO: | 123461 |
| INSPECTED BY: | S KRITAR | FUEL FRONT: | — |
| EMP. NUMBER: | 438449 | FUEL REAR: | — |

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | N | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | — | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: Unit is stained on floor boards and dash.
LOUD RATTLE FROM Exhaust system occurs frequently.
Exterior O.K.

INSPECTORS SIGNATURE: Steve Kritar  DATE: 1/9/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

| | | | |
|---|---|---|---|
| UNIT NO: | 101069 | WEEK ENDING: | 1/9/09 |
| UNIT MILES: | 46800 | CURRENT JOB NO: | 23461 |
| INSPECTED BY: | S. KRITAK | FUEL FRONT: | — |
| EMP. NUMBER: | 438449 | FUEL REAR: | — |

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | N | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | — | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: Small dent on right side rear chrome bumper

INSPECTORS SIGNATURE: Sturm Kritak  DATE: 1/9/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 46950
INSPECTED BY: S. KRITAL
EMP. NUMBER: 438449

WEEK ENDING: 1/19/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

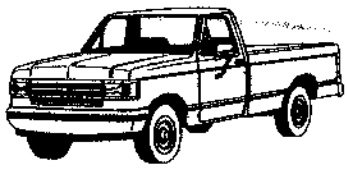
N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| | Unit Fueled Yes / No | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

WAS UNIT SERVICED Y (N)  DATE  MILES

COMMENTS: No Problems

INSPECTORS SIGNATURE: Steve Krital  DATE: 1/19/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 100600
UNIT MILES: 97720
INSPECTED BY: S. KRITIKL
EMP. NUMBER: 438449

WEEK ENDING: 1/19/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. **Yes / No** | O | Transmission Oil & Drive Line |
| | Unit Fueled **Yes / No** | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer-Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| N | | |

COMMENTS: No Problems

INSPECTORS SIGNATURE: Steven Kritikl  DATE: 1/19/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 10/069
UNIT MILES: 47647 2.23.09
INSPECTED BY: S Bates
EMP. NUMBER: 743826

WEEK ENDING: 2-20-09
CURRENT JOB NO:
FUEL FRONT: 7 1/2
FUEL REAR: N/A

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| 7 1/2 | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | N | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

**WAS UNIT SERVICED (Y) N** **DATE** **MILES**

COMMENTS:

(1) Small Hole in Muffler

(2) Small crack windshield

**INSPECTORS SIGNATURE:** [signature] **DATE:** 2-23-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 100600
UNIT MILES: 99096
INSPECTED BY: SCRITAK
EMP. NUMBER: 438449

WEEK ENDING: 2/20/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| | Unit Fueled Yes / No | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer-Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

INSPECTORS SIGNATURE: [signature] DATE: 2/20/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 1006010
UNIT MILES: 98440
INSPECTED BY: S. KREMAK
EMP. NUMBER: 438449

WEEK ENDING: 2/20/09
CURRENT JOB NO: 123461
FUEL FRONT: 1/
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler RATTLES |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers See note | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | N/A | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: Windshield has crack across bottom occurred over weekend while truck was parked

INSPECTORS SIGNATURE: S Kmtak  DATE: 2/16/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 97244
INSPECTED BY: S BANKS
EMP. NUMBER: 43 8326

WEEK ENDING: 2/20/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

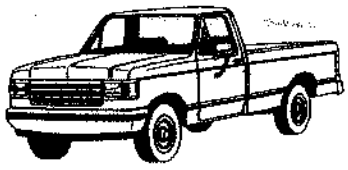
**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| 1/4 | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | N | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

**WAS UNIT SERVICED (Y) / N** **DATE** **MILES**

COMMENTS:
VEHICLE WAS JUST SERVICED ON 2-12-09
(N) SMALL CRACK IN WIND SHIELD
(N) SMALL HOLE IN EXHAUST PIPE

**INSPECTORS SIGNATURE:** S Banks **DATE:** 2-16-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 48024
INSPECTED BY: Chris Stinson
EMP. NUMBER: 1193219

WEEK ENDING: 3-6-09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR: X

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. **Yes / No** | O | Transmission Oil & Drive Line |
| O | Unit Fueled **Yes / No** | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:
CRACK IN WINDSHIELD
NEED A NEW ONE

INSPECTORS SIGNATURE: [signature]  DATE: 3-5-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 100600
UNIT MILES: 995888
INSPECTED BY: S Kvitek
EMP. NUMBER: 438449

WEEK ENDING: 3/06/09
CURRENT JOB NO: 123461
FUEL FRONT: \
FUEL REAR: \

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE **C** = COMMENTS **O** = OKAY **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| | Unit Fueled Yes / No | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

WAS UNIT SERVICED Y / (N) DATE MILES

COMMENTS: Scheduled for service early next week.

INSPECTORS SIGNATURE: S Kvitek DATE: 3/3/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101 & 09
UNIT MILES: 49257
INSPECTED BY: [illegible]
EMP. NUMBER: 147229

WEEK ENDING: 3-10-09
CURRENT JOB NO: _____
FUEL FRONT: _____
FUEL REAR: _____

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | C | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | C | Radiator / Cooling System |
| C | Air Conditioner / Heater | C | Exhaust / Muffler |
| C | Battery / Starter / Horn | O | Front Axle / Steering |
| C | Lights, Head-Tail-Turn-Stop-Emer. | C | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| C | Service Brakes | O | Tires / Wheels / Rims |
| C | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| C | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: crack in windshield
hole in muffler

INSPECTORS SIGNATURE: [signature] DATE: 3-10-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 10169
UNIT MILES: 148414
INSPECTED BY: Grimwood
EMP. NUMBER: 119206

WEEK ENDING: 3-13-07
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: Crack in windshield.
Hole in muffler.

INSPECTORS SIGNATURE: [signature] DATE: 3-13-07



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 49960
INSPECTED BY: [illegible]
EMP. NUMBER: 1192206

WEEK ENDING: 3-24-09
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

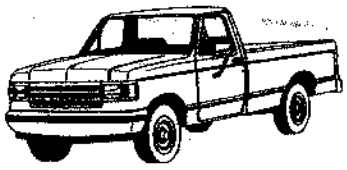
**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: CRACK IN WINDSHIELD
HOLE IN MUFFLER

INSPECTORS SIGNATURE: [signature]  DATE: 4-24-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101669
UNIT MILES: 48913
INSPECTED BY: Eric Grossard
EMP. NUMBER: 1122609

WEEK ENDING: 3-27-09
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | C | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: crack in windshield lr side.
hole in muffler.

INSPECTORS SIGNATURE: [signature]  DATE: 3-27-09.

Col 330 49850

101669 48950

101495 100600



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 50,452
INSPECTED BY: C. Brown
EMP. NUMBER: 1176271

WEEK ENDING: 5/8/09
CURRENT JOB NO:
FUEL FRONT: Full
FUEL REAR: NONE

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled (Yes / No) | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

INSPECTORS SIGNATURE: Chas A J Brown  DATE: 5/8/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 131069
UNIT MILES: 50865
INSPECTED BY: Grimsrud
EMP. NUMBER: 119261

WEEK ENDING: 5-22-09
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | N/A | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: CRACK IN WINDSHIELD.
HOLE IN MUFFLER.

INSPECTORS SIGNATURE: [signature] DATE: 5-22-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 50332
INSPECTED BY: C. Bowser
EMP. NUMBER: 11765971

WEEK ENDING: 5/15/09
CURRENT JOB NO:
FUEL FRONT: 1/2 Tank
FUEL REAR: None

*For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483*

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | Yes / No | | |
|---|---|---|---|---|
| O | Unit Washed, Interior Cleaned. | (Yes) / No | O | Transmission Oil & Drive Line |
| N | Unit Fueled | | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | | O | Suspension System |
| O | Ins. Card & Accident Report Kit | | O | Spare Tire |
| O | Current Registration, Plates | | O | Jack & Lug Wrench |
| O | Service Brakes | | O | Tires / Wheels / Rims |
| O | Parking Brakes | | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | | O | Coupling Devices |
| O | Mirrors-Inside-Outside | | O | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

Fueled 5/13/09

INSPECTORS SIGNATURE: Chuck Bowser  DATE: 5/15/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 57591
INSPECTED BY: C. Beaver
EMP. NUMBER: 176271

WEEK ENDING: 6/13/09
CURRENT JOB NO:
FUEL FRONT: Full
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. (Yes / No) | O | Transmission Oil & Drive Line |
| O | Unit Fueled | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

Yes / No

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

INSPECTORS SIGNATURE: Chet Beaver  DATE: 6/12/09

EQUIP. NO. 55674

EQUIP. TYPE CAT 330

ENDING HRS. 4850



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***



WEEK ENDING 1/19/09

SUPERVISOR KRITAK

LOCATION Radford, Va.

| SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|
| | | O | O | O | O | O |

A=ADD O=OKAY C=COMMENTS

ITEM

1 Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc.
2 Check Hydraulic Oil Level, Inspect The Cap And Vent.
3 Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc.
4 Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators)
5 Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only)
6 Check For Leaks Of Any Kind, I.E., Oil Or Coolant.
7 Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc.
8 Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc.
9 Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc.
10 Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc.
11 Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc.
12 Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge.
Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items.
Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks.
13 Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas.
Check Grab Handles And Step Treads, Etc.
14 Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc.
15 Look Under The Machine For Any Loose Or Hanging Objects, Leaks
Or Anything Out Of The Ordinary.
16 Check Fuel Level, Fill Tank Prior To Beginning Operations.
17 **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links,**
**Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease**
**Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.**
18 Check Breathing Air System ( If Used ) Make Sure Bottle Is Full
And Mask / Hose Assembly Is Clean And In Good Working Condition.
19 **Ensure The Presence Of The Operations / Maintenance Manual.**

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

Please report any items in need of immediate attention.

**COMMENTS:** Please use line number and be specific. No Problems, machine only RUN 10 hrs for entire week

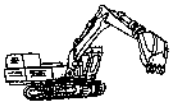
**Signature:** Steve Kritak **Employee Number:** 438449

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 240-10

EQUIP. TYPE JD 200

ENDING HRS. 2376



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 4/3/09

SUPERVISOR S. KRITAK

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | | O | O | O | O |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | | C | C | C | C |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | | C | C | C | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | | O | O | O | O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | | | | | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | | | | | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

NO. 11 - WINDSHIELD WIPER DOESN'T WORK

NO. 12 - VERY DIRTY

Employee Number: 176271

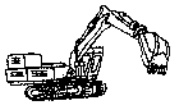
Signature: Chad Brown

*THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.*

EQUIP. NO. 55674

EQUIP. TYPE 330 HOE

ENDING HRS. 4925



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 4/10/09

SUPERVISOR S. KRITAK

LOCATION RADFORD VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | | O | | | |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | | O | | | |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | | O | | | |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | | O | | | |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | | O | | | |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | | O | | | |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | | O | | | |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | | O | | | |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | | O | | | |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | | O | | | |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | | O | | | |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | | O | | | |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | | O | | | |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | | O | | | |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | | O | | | |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | | | | | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | | | | | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

**Employee Number:** 117627

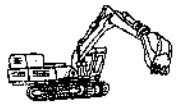
**Signature:**

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE TRACK HOE

ENDING HRS. 4960





Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

WEEK ENDING 4/24/09

SUPERVISOR S. KERTOSH

LOCATION RADFORD VA

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | N/A | N/A | N/A | N/A | N/A |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | O | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | O |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O<br>O | O<br>O | O<br>O | O<br>O | O<br>O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | N/A |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | O | O |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | O | O | O | O | O |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

**Employee Number:**

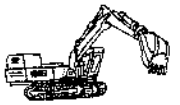
**Signature:**

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE TRACK HOE

ENDING HRS. 4970



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/1/09

SUPERVISOR S Keitsch

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | | |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | | |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | | |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | | |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | N/A | N/A | N/A | N/A | N/A |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | | |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | | |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | | |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | | |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | | |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | | |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | | |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | | |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | | |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | A | O | O | | |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

Monday/ grease Machine Line 17

**Employee Number:** 117687

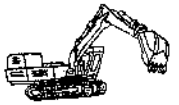
**Signature:**

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EQUIP. NO. 55674

EQUIP. TYPE Track Hoe

ENDING HRS. 4970



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/8/09

SUPERVISOR S. Kellett

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | O | O |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | O | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | O |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | O | O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | N/A |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | O | O |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | O | O | O | O | O |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

**Employee Number:** 117627

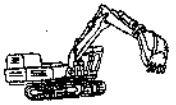
**Signature:** Chris J Bain

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EQUIP. NO. 55674

EQUIP. TYPE Track Hoe

ENDING HRS. 4982



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/15/09

SUPERVISOR S. Keitor

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | O | O |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | O | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | O |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | O | O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | N/A |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | N/A | O | O | O | O |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

Needs Wiper Blade — Replaced 5/13

**Employee Number:** 1176371

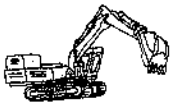
**Signature:** Chuck G Burns

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EQUIP. NO. 55674

EQUIP. TYPE Track Hoe

ENDING HRS. 4984



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/22/09

SUPERVISOR S. Kittak

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | O | |
| 6 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | N/A | N/A | N/A | N/A | |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | O | |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | O | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

Hour Meter not working properly

**Employee Number:** 117627

**Signature:** Chad J Bass

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RA-603 (REV. 7/05)

# RADFORD ARMY AMMUNITION PLANT
## Alliant Ammunition & Energetics
## Radford, Virginia

Date 5-24-09

## AREA ENTRY PERMIT
(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to Shaw Environmental Inc

Area of Work: EWI Settling Beds (SWMU 32)

Description of work to be performed: Cut down trees, remove fence, remove and replace contaminated soil with excavation equipment.

Special Precautions and/or Limitations to be followed: Have a Fire Extinguisher on all vehicles; move vehicles 50 ft away from surrounding buildings at the end of each shift.

This permit is authorizing entry for the following period:

beginning 5-24-09 20 09 at 0820 a.m. p.m.

and ending 6-30-09 20 09 at 1600 a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

Operating Department

Safety Department

Engineer

Contractor's Representative

WHITE-SAFETY
YELLOW-ENGINEERING
BLUE- OPR. DEPT.
GREEN-SUBCONTRACTOR

RA-604 Rev 1-98

# RFAAP, Alliant Techsystems, Inc.
# Subcontractor Hot Work Permit

12174

Location Flat Setting Pads Bay # (Cum. 39) Owner Wanda Jones

Subcontractor Authorized Shaw Environmental

Devices to be used Chainsaws & wood chipper

Scope of work (in detail) Remove trees from the North and South setting pads

Special Precautions Keep a Fire extinguisher nearby.

**Checklist** √ Appropriate conditions met for approval

- ___ Combustibles 50' from Hot Work
- ___ Hot Work adjacent to combustibles
- ___ Combustibles covered
- ___ Floor or wall openings protected
- ___ Conveyors/chutes protected
- ___ Vapors contained so not to enter
- ___ Fresh air required
- ___ Exhaust required
- ___ Flashing required
- ___ Floor swept clean of combustibles
- ✓ Extinguisher on site
- ___ Charged water hose
- ___ Bldg Protection
- ___ Piping Protected
- ___ Bldg posted
- ✓ Training complete
- ___ CSE required
- ___ Area to be kept wet
- ___ NG remover required
- ___ LEL Reading ____%

**Special PPE Required**

Model ____

Row# ____

Last cal. ____

Fire watch ☐ Required ☑ Not Required

Permit valid for the day(s) of 03-24-09 thru 06-30-09

For the time period 0700 to 1700

**Approval Signatures**

Operating [signature] Engineer [signature]

Safety E. W. Hollis Subcontractor [signature]

White - Safety | Yellow - Engineering | Blue - Operations | Green - Subcontractors

# FLFA IM Completion Report

# Appendices

Final

February 2010

# Appendix A

## Photo Log

# Site Excavation












# Loading









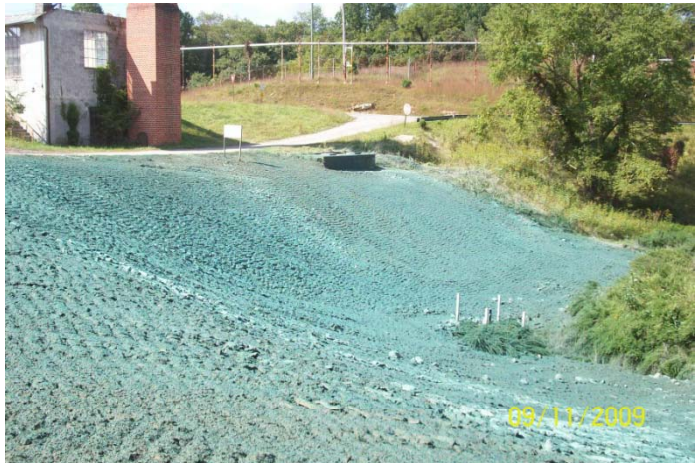



# Site Restoration












# Appendix B

IM Data

# Appendix B-1

# Laboratory Data

**Appendix B-1**
**FLFA Laboratory Data**

| Site | Location | Depth Top | Depth Bottom | Lab Name | SDG | Field Id |
|---|---|---|---|---|---|---|
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC01/FLFA-FL-1-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC01/FLFA-FL-1-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC01/FLFA-FL-1-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC01/FLFA-FL-1-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC01/FLFA-FL-1-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC01/FLFA-FL-1-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC01/FLFA-FL-1-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC01/FLFA-FL-1-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC01/FLFA-FL-1-0-1' |
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| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
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| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |

**Appendix B-1**
**FLFA Laboratory Data**

| Site | Location | Depth Top | Depth Bottom | Lab Name | SDG | Field Id |
|---|---|---|---|---|---|---|
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
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| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
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| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
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| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
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| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
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| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
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| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC02/FLFA-FL-9-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |

**Appendix B-1**
**FLFA Laboratory Data**

| Site | Location | Depth Top | Depth Bottom | Lab Name | SDG | Field Id |
|---|---|---|---|---|---|---|
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC03/FLFA-FL-17-0-1' |
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| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
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| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |

**Appendix B-1**
**FLFA Laboratory Data**

| Site | Location | Depth Top | Depth Bottom | Lab Name | SDG | Field Id |
|---|---|---|---|---|---|---|
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 1.0 | 2.0 | TAWS | G9G300243 | LFSC04/FLFA-FL-18-1-2' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |

**Appendix B-1**
**FLFA Laboratory Data**

| Site | Location | Depth Top | Depth Bottom | Lab Name | SDG | Field Id |
|---|---|---|---|---|---|---|
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC05/FLFA-SW-2-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |

**Appendix B-1**
**FLFA Laboratory Data**

| Site | Location | Depth Top | Depth Bottom | Lab Name | SDG | Field Id |
|---|---|---|---|---|---|---|
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | LFSC06/FLFA-SW-10-01' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 2.0 | 3.0 | TAWS | G9G300243 | LFSC07/FLFA-FL-7-2-3' |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | TMSC01 |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | TMSC01 |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | TMSC01 |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | TMSC01 |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | TMSC01 |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | TMSC01 |
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | TMSC01 |

**Appendix B-1**
**FLFA Laboratory Data**

| Site | Location | Depth Top | Depth Bottom | Lab Name | SDG | Field Id |
|---|---|---|---|---|---|---|
| RFAAP | FLFA | 0.0 | 1.0 | TAWS | G9G300243 | TMSC01 |

**Appendix B-1**
**FLFA Laboratory Data**

| Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date |
|---|---|---|---|---|---|---|
| SO | G9G300243001 | D2216-90 | D 2216-90 | 07/27/09 | 07/30/09 | 08/03/09 |
| SO | G9G300243001 | 7471A | 7471A | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243001 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243001 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243001 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243001 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243001 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243001 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243001 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243001 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |

**Appendix B-1**
**FLFA Laboratory Data**

| Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date |
|---|---|---|---|---|---|---|
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | D2216-90 | D 2216-90 | 07/27/09 | 07/30/09 | 08/03/09 |
| SO | G9G300243002 | 7471A | 7471A | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243002 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | D2216-90 | D 2216-90 | 07/28/09 | 07/30/09 | 08/03/09 |
| SO | G9G300243003 | 7471A | 7471A | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243003 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243003 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243003 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243003 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243003 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243003 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243003 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |

**Appendix B-1**
**FLFA Laboratory Data**

| Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date |
|---|---|---|---|---|---|---|
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243003 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | D2216-90 | D 2216-90 | 07/28/09 | 07/30/09 | 08/03/09 |
| SO | G9G300243004 | 7471A | 7471A | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |

**Appendix B-1**
**FLFA Laboratory Data**

| Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date |
|---|---|---|---|---|---|---|
| SO | G9G300243004 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243004 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | D2216-90 | D 2216-90 | 07/27/09 | 07/30/09 | 08/03/09 |
| SO | G9G300243005 | 7471A | 7471A | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243005 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243005 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243005 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243005 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243005 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243005 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243005 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243005 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |

**Appendix B-1**
**FLFA Laboratory Data**

| Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date |
|---|---|---|---|---|---|---|
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243005 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 8290 | 8290 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | D2216-90 | D 2216-90 | 07/27/09 | 07/30/09 | 08/03/09 |
| SO | G9G300243006 | 7471A | 7471A | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 3550B/3665A | 8082 | 07/27/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |

**Appendix B-1**
**FLFA Laboratory Data**

| Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date |
|---|---|---|---|---|---|---|
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243006 | 3050B | 6010B | 07/27/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | D2216-90 | D 2216-90 | 07/28/09 | 07/30/09 | 08/03/09 |
| SO | G9G300243007 | 7471A | 7471A | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243007 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243007 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243007 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243007 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243007 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243007 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243007 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243007 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243007 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |

**Appendix B-1**
**FLFA Laboratory Data**

| Matrix | Lab Id | Prep Method No | Anal Method No | Sample Date | Receipt Date | Prep Date |
|---|---|---|---|---|---|---|
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 8290 | 8290 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | D2216-90 | D 2216-90 | 07/28/09 | 07/30/09 | 08/03/09 |
| SO | G9G300243008 | 7471A | 7471A | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 3550B/3665A | 8082 | 07/28/09 | 07/30/09 | 07/30/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243008 | 3050B | 6010B | 07/28/09 | 07/30/09 | 07/31/09 |
| SO | G9G300243001 | D2216-90 | D 2216-90 | 07/27/09 | 07/30/09 | 08/03/09 |

**Appendix B-1**
**FLFA Laboratory Data**

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 08/04/09 | Q1028 | Percent Moisture | 17 | | NOT | |
| 07/31/09 | 7439-97-6 | Mercury | 0.035 | B | VALIDATED | B |
| 07/31/09 | 12674-11-2 | Aroclor 1016 | 40 | U | TO DATE | U |
| 07/31/09 | 11104-28-2 | Aroclor 1221 | 40 | U | | U |
| 07/31/09 | 11141-16-5 | Aroclor 1232 | 40 | U | | U |
| 07/31/09 | 53469-21-9 | Aroclor 1242 | 40 | U | | U |
| 07/31/09 | 12672-29-6 | Aroclor 1248 | 40 | U | | U |
| 07/31/09 | 11097-69-1 | Aroclor 1254 | 40 | U | | U |
| 07/31/09 | 11096-82-5 | Aroclor 1260 | 87 | | | |
| 07/31/09 | 2051-24-3 | Decachlorobiphenyl | 15 | | | |
| 07/31/09 | 7440-36-0 | Antimony | 1.8 | U | | U |
| 07/31/09 | 7440-38-2 | Arsenic | 5.3 | | | |
| 07/31/09 | 7439-89-6 | Iron | 24900 | | | |
| 07/31/09 | 7439-92-1 | Lead | 25.4 | | | |
| 07/31/09 | 7439-95-4 | Magnesium | 8600 | | | |
| 07/31/09 | 7439-96-5 | Manganese | 679 | | | |
| 07/31/09 | 7440-39-3 | Barium | 65.1 | | | |
| 07/31/09 | 7440-02-0 | Nickel | 20.5 | | | |
| 07/31/09 | 7440-09-7 | Potassium | 1480 | | | |
| 07/31/09 | 7440-41-7 | Beryllium | 1.6 | | | |
| 07/31/09 | 7782-49-2 | Selenium | 2.4 | U | | U |
| 07/31/09 | 7440-22-4 | Silver | 0.60 | U | | U |
| 07/31/09 | 7440-23-5 | Sodium | 603 | U | | U |
| 07/31/09 | 7440-28-0 | Thallium | 2.4 | U | | U |
| 07/31/09 | 7440-62-2 | Vanadium | 48.4 | | | |
| 07/31/09 | 7440-66-6 | Zinc | 48.5 | | | |
| 07/31/09 | 7440-47-3 | Chromium | 28.7 | | | |
| 07/31/09 | 7440-43-9 | Cadmium | 0.36 | U | | U |
| 07/31/09 | 7440-70-2 | Calcium | 1230 | | | |
| 07/31/09 | 7440-48-4 | Cobalt | 15.3 | | | |
| 07/31/09 | 7440-50-8 | Copper | 18.4 | | | |
| 07/31/09 | 7429-90-5 | Aluminum | 19400 | | | |
| 07/31/09 | 51207-31-9 | 2,3,7,8-TCDF | 4.5 | CON B | | CON B |
| 07/31/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 3.2 | J B | | J B |
| 07/31/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 5.5 | J B | | J B |
| 07/31/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 7.1 | B | | B |
| 07/31/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 6.1 | J B | | J B |
| 07/31/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.33 | J | | J |
| 07/31/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 28 | B | | B |
| 07/31/09 | 39001-02-0 | OCDF | 21 | B | | B |
| 07/31/09 | 55722-27-5 | Total TCDF | 56 | | | |
| 07/31/09 | 30402-15-4 | Total PeCDF | 55 | | | |
| 07/31/09 | 55684-94-1 | Total HxCDF | 51 | | | |
| 07/31/09 | 38998-75-3 | Total HpCDF | 45 | | | |
| 07/31/09 | 41903-57-5 | Total TCDD | 11 | | | |
| 07/31/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.64 | J B | | J B |
| 07/31/09 | 36088-22-9 | Total PeCDD | 18 | | | |
| 07/31/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 1.5 | J | | J |
| 07/31/09 | 34465-46-8 | Total HxCDD | 34 | | | |
| 07/31/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 4.7 | J | | J |
| 07/31/09 | 37871-00-4 | Total HpCDD | 100 | | | |

**Appendix B-1**
**FLFA Laboratory Data**

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 07/31/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 51 | B | | B |
| 07/31/09 | 3268-87-9 | OCDD | 3100 | B | | B |
| 07/31/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 5.1 | J B | | J B |
| 07/31/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 2.5 | J B | | J B |
| 07/31/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 1.4 | J | | J |
| 07/31/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 2.9 | J | | J |
| 08/04/09 | Q1028 | Percent Moisture | 22 | | | |
| 07/31/09 | 7439-97-6 | Mercury | 0.13 | | | |
| 07/31/09 | 12674-11-2 | Aroclor 1016 | 42 | U | | U |
| 07/31/09 | 11104-28-2 | Aroclor 1221 | 42 | U | | U |
| 07/31/09 | 11141-16-5 | Aroclor 1232 | 42 | U | | U |
| 07/31/09 | 53469-21-9 | Aroclor 1242 | 42 | U | | U |
| 07/31/09 | 12672-29-6 | Aroclor 1248 | 42 | U | | U |
| 07/31/09 | 11097-69-1 | Aroclor 1254 | 42 | U | | U |
| 07/31/09 | 11096-82-5 | Aroclor 1260 | 42 | U | | U |
| 07/31/09 | 2051-24-3 | Decachlorobiphenyl | 17 | | | |
| 07/31/09 | 7440-36-0 | Antimony | 1.9 | U | | U |
| 07/31/09 | 7440-38-2 | Arsenic | 7.0 | | | |
| 07/31/09 | 7439-89-6 | Iron | 28000 | | | |
| 07/31/09 | 7439-92-1 | Lead | 62.5 | | | |
| 07/31/09 | 7439-95-4 | Magnesium | 3330 | | | |
| 07/31/09 | 7439-96-5 | Manganese | 312 | | | |
| 07/31/09 | 7440-39-3 | Barium | 81.1 | | | |
| 07/31/09 | 7440-02-0 | Nickel | 13 | | | |
| 07/31/09 | 7440-09-7 | Potassium | 1150 | | | |
| 07/31/09 | 7440-41-7 | Beryllium | 0.83 | | | |
| 07/31/09 | 7782-49-2 | Selenium | 2.6 | U | | U |
| 07/31/09 | 7440-22-4 | Silver | 1.3 | | | |
| 07/31/09 | 7440-23-5 | Sodium | 34.9 | B | | B |
| 07/31/09 | 7440-28-0 | Thallium | 2.6 | U | | U |
| 07/31/09 | 7440-62-2 | Vanadium | 54.2 | | | |
| 07/31/09 | 7440-66-6 | Zinc | 110 | | | |
| 07/31/09 | 7440-47-3 | Chromium | 31.8 | | | |
| 07/31/09 | 7440-43-9 | Cadmium | 0.21 | B | | B |
| 07/31/09 | 7440-70-2 | Calcium | 2120 | | | |
| 07/31/09 | 7440-48-4 | Cobalt | 8.4 | | | |
| 07/31/09 | 7440-50-8 | Copper | 33.3 | | | |
| 07/31/09 | 7429-90-5 | Aluminum | 20700 | | | |
| 08/04/09 | Q1028 | Percent Moisture | 22.5 | | | |
| 07/31/09 | 7439-97-6 | Mercury | 0.069 | | | |
| 07/31/09 | 12674-11-2 | Aroclor 1016 | 42 | U | | U |
| 07/31/09 | 11104-28-2 | Aroclor 1221 | 42 | U | | U |
| 07/31/09 | 11141-16-5 | Aroclor 1232 | 42 | U | | U |
| 07/31/09 | 53469-21-9 | Aroclor 1242 | 42 | U | | U |
| 07/31/09 | 12672-29-6 | Aroclor 1248 | 42 | U | | U |
| 07/31/09 | 11097-69-1 | Aroclor 1254 | 42 | U | | U |
| 07/31/09 | 11096-82-5 | Aroclor 1260 | 42 | U | | U |
| 07/31/09 | 2051-24-3 | Decachlorobiphenyl | 17 | | | |
| 07/31/09 | 7440-36-0 | Antimony | 1.9 | U | | U |
| 07/31/09 | 7440-38-2 | Arsenic | 5.5 | | | |
| 07/31/09 | 7439-89-6 | Iron | 34900 | | | |

**Appendix B-1**
**FLFA Laboratory Data**

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 07/31/09 | 7439-92-1 | Lead | 27.7 | | | |
| 07/31/09 | 7439-95-4 | Magnesium | 11200 | | | |
| 07/31/09 | 7439-96-5 | Manganese | 457 | | | |
| 07/31/09 | 7440-39-3 | Barium | 118 | | | |
| 07/31/09 | 7440-02-0 | Nickel | 32.9 | | | |
| 07/31/09 | 7440-09-7 | Potassium | 2310 | | | |
| 07/31/09 | 7440-41-7 | Beryllium | 2.3 | | | |
| 07/31/09 | 7782-49-2 | Selenium | 2.6 | U | | U |
| 07/31/09 | 7440-22-4 | Silver | 0.52 | B | | B |
| 07/31/09 | 7440-23-5 | Sodium | 49.6 | B | | B |
| 07/31/09 | 7440-28-0 | Thallium | 2.6 | U | | U |
| 07/31/09 | 7440-62-2 | Vanadium | 60.3 | | | |
| 07/31/09 | 7440-66-6 | Zinc | 91.2 | | | |
| 07/31/09 | 7440-47-3 | Chromium | 39.1 | | | |
| 07/31/09 | 7440-43-9 | Cadmium | 0.39 | U | | U |
| 07/31/09 | 7440-70-2 | Calcium | 1830 | | | |
| 07/31/09 | 7440-48-4 | Cobalt | 14.9 | | | |
| 07/31/09 | 7440-50-8 | Copper | 38.7 | | | |
| 07/31/09 | 7429-90-5 | Aluminum | 26500 | | | |
| 07/31/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.58 | J CON B | | J CON B |
| 07/31/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.33 | J B | | J B |
| 07/31/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.39 | J Q B | | J Q B |
| 07/31/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 1.2 | J B | | J B |
| 07/31/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.40 | J B | | J B |
| 07/31/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.044 | J | | J |
| 07/31/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 8.5 | B | | B |
| 07/31/09 | 39001-02-0 | OCDF | 27 | B | | B |
| 07/31/09 | 55722-27-5 | Total TCDF | 4.3 | | | |
| 07/31/09 | 30402-15-4 | Total PeCDF | 4.4 | | | |
| 07/31/09 | 55684-94-1 | Total HxCDF | 11 | | | |
| 07/31/09 | 38998-75-3 | Total HpCDF | 28 | | | |
| 07/31/09 | 41903-57-5 | Total TCDD | 1.7 | | | |
| 07/31/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.26 | J B | | J B |
| 07/31/09 | 36088-22-9 | Total PeCDD | 2.6 | | | |
| 07/31/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 0.40 | J | | J |
| 07/31/09 | 34465-46-8 | Total HxCDD | 10 | | | |
| 07/31/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 1.3 | J | | J |
| 07/31/09 | 37871-00-4 | Total HpCDD | 88 | | | |
| 07/31/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 48 | B | | B |
| 07/31/09 | 3268-87-9 | OCDD | 4400 | B | | B |
| 07/31/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.48 | J B | | J B |
| 07/31/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.61 | J B | | J B |
| 07/31/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.46 | J | | J |
| 07/31/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 1.1 | J | | J |
| 08/04/09 | Q1028 | Percent Moisture | 18.5 | | | |
| 07/31/09 | 7439-97-6 | Mercury | 0.055 | | | |
| 07/31/09 | 12674-11-2 | Aroclor 1016 | 40 | U | | U |
| 07/31/09 | 11104-28-2 | Aroclor 1221 | 40 | U | | U |
| 07/31/09 | 11141-16-5 | Aroclor 1232 | 40 | U | | U |
| 07/31/09 | 53469-21-9 | Aroclor 1242 | 40 | U | | U |
| 07/31/09 | 12672-29-6 | Aroclor 1248 | 40 | U | | U |

**Appendix B-1**
**FLFA Laboratory Data**

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 07/31/09 | 11097-69-1 | Aroclor 1254 | 40 | U | | U |
| 07/31/09 | 11096-82-5 | Aroclor 1260 | 40 | U | | U |
| 07/31/09 | 2051-24-3 | Decachlorobiphenyl | 15 | | | |
| 07/31/09 | 7440-36-0 | Antimony | 1.8 | U | | U |
| 07/31/09 | 7440-38-2 | Arsenic | 5.9 | | | |
| 07/31/09 | 7439-89-6 | Iron | 34600 | | | |
| 07/31/09 | 7439-92-1 | Lead | 20 | | | |
| 07/31/09 | 7439-95-4 | Magnesium | 11300 | | | |
| 07/31/09 | 7439-96-5 | Manganese | 869 | | | |
| 07/31/09 | 7440-39-3 | Barium | 102 | | | |
| 07/31/09 | 7440-02-0 | Nickel | 15.7 | | | |
| 07/31/09 | 7440-09-7 | Potassium | 2260 | | | |
| 07/31/09 | 7440-41-7 | Beryllium | 0.92 | | | |
| 07/31/09 | 7782-49-2 | Selenium | 2.5 | U | | U |
| 07/31/09 | 7440-22-4 | Silver | 0.61 | U | | U |
| 07/31/09 | 7440-23-5 | Sodium | 70.7 | B | | B |
| 07/31/09 | 7440-28-0 | Thallium | 2.5 | U | | U |
| 07/31/09 | 7440-62-2 | Vanadium | 60.9 | | | |
| 07/31/09 | 7440-66-6 | Zinc | 46.8 | | | |
| 07/31/09 | 7440-47-3 | Chromium | 30.5 | | | |
| 07/31/09 | 7440-43-9 | Cadmium | 0.37 | U | | U |
| 07/31/09 | 7440-70-2 | Calcium | 16800 | | | |
| 07/31/09 | 7440-48-4 | Cobalt | 17.2 | | | |
| 07/31/09 | 7440-50-8 | Copper | 20.9 | | | |
| 07/31/09 | 7429-90-5 | Aluminum | 27800 | | | |
| 08/04/09 | Q1028 | Percent Moisture | 21.9 | | | |
| 07/31/09 | 7439-97-6 | Mercury | 0.035 | B | | B |
| 07/31/09 | 12674-11-2 | Aroclor 1016 | 42 | U | | U |
| 07/31/09 | 11104-28-2 | Aroclor 1221 | 42 | U | | U |
| 07/31/09 | 11141-16-5 | Aroclor 1232 | 42 | U | | U |
| 07/31/09 | 53469-21-9 | Aroclor 1242 | 42 | U | | U |
| 07/31/09 | 12672-29-6 | Aroclor 1248 | 42 | U | | U |
| 07/31/09 | 11097-69-1 | Aroclor 1254 | 16 | J | | J |
| 07/31/09 | 11096-82-5 | Aroclor 1260 | 42 | U | | U |
| 07/31/09 | 2051-24-3 | Decachlorobiphenyl | 17 | | | |
| 07/31/09 | 7440-36-0 | Antimony | 1.9 | U | | U |
| 07/31/09 | 7440-38-2 | Arsenic | 5.6 | | | |
| 07/31/09 | 7439-89-6 | Iron | 22800 | | | |
| 07/31/09 | 7439-92-1 | Lead | 23.8 | | | |
| 07/31/09 | 7439-95-4 | Magnesium | 22300 | | | |
| 07/31/09 | 7439-96-5 | Manganese | 520 | | | |
| 07/31/09 | 7440-39-3 | Barium | 66.5 | | | |
| 07/31/09 | 7440-02-0 | Nickel | 20.5 | | | |
| 07/31/09 | 7440-09-7 | Potassium | 2200 | | | |
| 07/31/09 | 7440-41-7 | Beryllium | 1.3 | | | |
| 07/31/09 | 7782-49-2 | Selenium | 2.6 | U | | U |
| 07/31/09 | 7440-22-4 | Silver | 0.64 | U | | U |
| 07/31/09 | 7440-23-5 | Sodium | 40.4 | B | | B |
| 07/31/09 | 7440-28-0 | Thallium | 2.6 | U | | U |
| 07/31/09 | 7440-62-2 | Vanadium | 46.5 | | | |
| 07/31/09 | 7440-66-6 | Zinc | 73.1 | | | |

**Appendix B-1**
**FLFA Laboratory Data**

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 07/31/09 | 7440-47-3 | Chromium | 33.3 | | | |
| 07/31/09 | 7440-43-9 | Cadmium | 0.38 | U | | U |
| 07/31/09 | 7440-70-2 | Calcium | 12100 | | | |
| 07/31/09 | 7440-48-4 | Cobalt | 10 | | | |
| 07/31/09 | 7440-50-8 | Copper | 34.2 | | | |
| 07/31/09 | 7429-90-5 | Aluminum | 20800 | | | |
| 08/01/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.61 | J CON B | | J CON B |
| 08/01/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.33 | J B | | J B |
| 08/01/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.46 | J B | | J B |
| 08/01/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 1.0 | J B | | J B |
| 08/01/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.38 | J B | | J B |
| 08/01/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 6.0 | U | | U |
| 08/01/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 8.0 | B | | B |
| 08/01/09 | 39001-02-0 | OCDF | 25 | B | | B |
| 08/01/09 | 55722-27-5 | Total TCDF | 6.3 | | | |
| 08/01/09 | 30402-15-4 | Total PeCDF | 4.7 | | | |
| 08/01/09 | 55684-94-1 | Total HxCDF | 10 | | | |
| 08/01/09 | 38998-75-3 | Total HpCDF | 30 | | | |
| 08/01/09 | 41903-57-5 | Total TCDD | 1.5 | | | |
| 08/01/09 | 1746-01-6 | 2,3,7,8-TCDD | 0.13 | J Q B | | J Q B |
| 08/01/09 | 36088-22-9 | Total PeCDD | 2.2 | | | |
| 08/01/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 0.38 | J | | J |
| 08/01/09 | 34465-46-8 | Total HxCDD | 9.6 | | | |
| 08/01/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 1.2 | J | | J |
| 08/01/09 | 37871-00-4 | Total HpCDD | 86 | | | |
| 08/01/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 47 | B | | B |
| 08/01/09 | 3268-87-9 | OCDD | 4500 | B | | B |
| 08/01/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.52 | J B | | J B |
| 08/01/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.61 | J B | | J B |
| 08/01/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.50 | J Q | | J Q |
| 08/01/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 1.1 | J | | J |
| 08/04/09 | Q1028 | Percent Moisture | 17.6 | | | |
| 07/31/09 | 7439-97-6 | Mercury | 0.070 | | | |
| 07/31/09 | 12674-11-2 | Aroclor 1016 | 40 | U | | U |
| 07/31/09 | 11104-28-2 | Aroclor 1221 | 40 | U | | U |
| 07/31/09 | 11141-16-5 | Aroclor 1232 | 40 | U | | U |
| 07/31/09 | 53469-21-9 | Aroclor 1242 | 40 | U | | U |
| 07/31/09 | 12672-29-6 | Aroclor 1248 | 40 | U | | U |
| 07/31/09 | 11097-69-1 | Aroclor 1254 | 21 | J | | J |
| 07/31/09 | 11096-82-5 | Aroclor 1260 | 40 | U | | U |
| 07/31/09 | 2051-24-3 | Decachlorobiphenyl | 16 | | | |
| 07/31/09 | 7440-36-0 | Antimony | 1.8 | U | | U |
| 07/31/09 | 7440-38-2 | Arsenic | 5.8 | | | |
| 07/31/09 | 7439-89-6 | Iron | 36700 | | | |
| 07/31/09 | 7439-92-1 | Lead | 21.3 | | | |
| 07/31/09 | 7439-95-4 | Magnesium | 4420 | | | |
| 07/31/09 | 7439-96-5 | Manganese | 348 | | | |
| 07/31/09 | 7440-39-3 | Barium | 59.1 | | | |
| 07/31/09 | 7440-02-0 | Nickel | 14.9 | | | |
| 07/31/09 | 7440-09-7 | Potassium | 1880 | | | |
| 07/31/09 | 7440-41-7 | Beryllium | 0.84 | | | |

**Appendix B-1**
**FLFA Laboratory Data**

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 07/31/09 | 7782-49-2 | Selenium | 2.4 | U | | U |
| 07/31/09 | 7440-22-4 | Silver | 0.61 | U | | U |
| 07/31/09 | 7440-23-5 | Sodium | 38.8 | B | | B |
| 07/31/09 | 7440-28-0 | Thallium | 2.4 | U | | U |
| 07/31/09 | 7440-62-2 | Vanadium | 62.4 | | | |
| 07/31/09 | 7440-66-6 | Zinc | 42.2 | | | |
| 07/31/09 | 7440-47-3 | Chromium | 38.1 | | | |
| 07/31/09 | 7440-43-9 | Cadmium | 0.36 | U | | U |
| 07/31/09 | 7440-70-2 | Calcium | 2380 | | | |
| 07/31/09 | 7440-48-4 | Cobalt | 10.4 | | | |
| 07/31/09 | 7440-50-8 | Copper | 21.4 | | | |
| 07/31/09 | 7429-90-5 | Aluminum | 32300 | | | |
| 08/04/09 | Q1028 | Percent Moisture | 16.5 | | | |
| 07/31/09 | 7439-97-6 | Mercury | 0.014 | B | | B |
| 07/31/09 | 12674-11-2 | Aroclor 1016 | 39 | U | | U |
| 07/31/09 | 11104-28-2 | Aroclor 1221 | 39 | U | | U |
| 07/31/09 | 11141-16-5 | Aroclor 1232 | 39 | U | | U |
| 07/31/09 | 53469-21-9 | Aroclor 1242 | 39 | U | | U |
| 07/31/09 | 12672-29-6 | Aroclor 1248 | 39 | U | | U |
| 07/31/09 | 11097-69-1 | Aroclor 1254 | 39 | U | | U |
| 07/31/09 | 11096-82-5 | Aroclor 1260 | 39 | U | | U |
| 07/31/09 | 2051-24-3 | Decachlorobiphenyl | 15 | | | |
| 07/31/09 | 7440-36-0 | Antimony | 1.8 | U | | U |
| 07/31/09 | 7440-38-2 | Arsenic | 6.7 | | | |
| 07/31/09 | 7439-89-6 | Iron | 33600 | | | |
| 07/31/09 | 7439-92-1 | Lead | 16.7 | | | |
| 07/31/09 | 7439-95-4 | Magnesium | 6990 | | | |
| 07/31/09 | 7439-96-5 | Manganese | 798 | | | |
| 07/31/09 | 7440-39-3 | Barium | 52.6 | | | |
| 07/31/09 | 7440-02-0 | Nickel | 14.8 | | | |
| 07/31/09 | 7440-09-7 | Potassium | 1030 | | | |
| 07/31/09 | 7440-41-7 | Beryllium | 0.93 | | | |
| 07/31/09 | 7782-49-2 | Selenium | 2.4 | U | | U |
| 07/31/09 | 7440-22-4 | Silver | 0.60 | U | | U |
| 07/31/09 | 7440-23-5 | Sodium | 32.1 | B | | B |
| 07/31/09 | 7440-28-0 | Thallium | 2.4 | U | | U |
| 07/31/09 | 7440-62-2 | Vanadium | 57.3 | | | |
| 07/31/09 | 7440-66-6 | Zinc | 32.3 | | | |
| 07/31/09 | 7440-47-3 | Chromium | 41.5 | | | |
| 07/31/09 | 7440-43-9 | Cadmium | 0.36 | U | | U |
| 07/31/09 | 7440-70-2 | Calcium | 1110 | | | |
| 07/31/09 | 7440-48-4 | Cobalt | 15.4 | | | |
| 07/31/09 | 7440-50-8 | Copper | 12.8 | | | |
| 07/31/09 | 7429-90-5 | Aluminum | 16900 | | | |
| 08/01/09 | 51207-31-9 | 2,3,7,8-TCDF | 0.13 | J Q B | | J Q B |
| 08/01/09 | 57117-41-6 | 1,2,3,7,8-PeCDF | 0.061 | J Q B | | J Q B |
| 08/01/09 | 57117-31-4 | 2,3,4,7,8-PeCDF | 0.13 | J Q B | | J Q B |
| 08/01/09 | 70648-26-9 | 1,2,3,4,7,8-HxCDF | 0.13 | J B | | J B |
| 08/01/09 | 60851-34-5 | 2,3,4,6,7,8-HxCDF | 0.058 | J B | | J B |
| 08/01/09 | 72918-21-9 | 1,2,3,7,8,9-HxCDF | 0.033 | J | | J |
| 08/01/09 | 67562-39-4 | 1,2,3,4,6,7,8-HpCDF | 0.15 | J Q B | | J Q B |

**Appendix B-1**
**FLFA Laboratory Data**

| Analysis Date | CAS | Analyte | Result | Lab Qualifier | Val Qualifier | Combined Qualifier |
|---|---|---|---|---|---|---|
| 08/01/09 | 39001-02-0 | OCDF | 0.12 | J Q B | | J Q B |
| 08/01/09 | 55722-27-5 | Total TCDF | 0.27 | | | |
| 08/01/09 | 30402-15-4 | Total PeCDF | 0.65 | | | |
| 08/01/09 | 55684-94-1 | Total HxCDF | 0.65 | | | |
| 08/01/09 | 38998-75-3 | Total HpCDF | 0.34 | | | |
| 08/01/09 | 41903-57-5 | Total TCDD | 1.2 | U | | U |
| 08/01/09 | 1746-01-6 | 2,3,7,8-TCDD | 1.2 | U | | U |
| 08/01/09 | 36088-22-9 | Total PeCDD | 5.9 | U | | U |
| 08/01/09 | 40321-76-4 | 1,2,3,7,8-PeCDD | 5.9 | U | | U |
| 08/01/09 | 34465-46-8 | Total HxCDD | 0.60 | | | |
| 08/01/09 | 19408-74-3 | 1,2,3,7,8,9-HxCDD | 0.10 | J | | J |
| 08/01/09 | 37871-00-4 | Total HpCDD | 2.8 | | | |
| 08/01/09 | 35822-46-9 | 1,2,3,4,6,7,8-HpCDD | 1.2 | J B | | J B |
| 08/01/09 | 3268-87-9 | OCDD | 54 | B | | B |
| 08/01/09 | 57117-44-9 | 1,2,3,6,7,8-HxCDF | 0.064 | J B | | J B |
| 08/01/09 | 55673-89-7 | 1,2,3,4,7,8,9-HpCDF | 0.080 | J Q B | | J Q B |
| 08/01/09 | 39227-28-6 | 1,2,3,4,7,8-HxCDD | 0.057 | J | | J |
| 08/01/09 | 57653-85-7 | 1,2,3,6,7,8-HxCDD | 0.070 | J | | J |
| 08/04/09 | Q1028 | Percent Moisture | 17.1 | | | |
| 07/31/09 | 7439-97-6 | Mercury | 0.014 | B | | B |
| 07/31/09 | 12674-11-2 | Aroclor 1016 | 39 | U | | U |
| 07/31/09 | 11104-28-2 | Aroclor 1221 | 39 | U | | U |
| 07/31/09 | 11141-16-5 | Aroclor 1232 | 39 | U | | U |
| 07/31/09 | 53469-21-9 | Aroclor 1242 | 39 | U | | U |
| 07/31/09 | 12672-29-6 | Aroclor 1248 | 39 | U | | U |
| 07/31/09 | 11097-69-1 | Aroclor 1254 | 39 | U | | U |
| 07/31/09 | 11096-82-5 | Aroclor 1260 | 39 | U | | U |
| 07/31/09 | 2051-24-3 | Decachlorobiphenyl | 15 | | | |
| 07/31/09 | 7440-36-0 | Antimony | 1.8 | U | | U |
| 07/31/09 | 7440-38-2 | Arsenic | 4.4 | | | |
| 07/31/09 | 7439-89-6 | Iron | 22800 | | | |
| 07/31/09 | 7439-92-1 | Lead | 12.3 | | | |
| 07/31/09 | 7439-95-4 | Magnesium | 10100 | | | |
| 07/31/09 | 7439-96-5 | Manganese | 511 | | | |
| 07/31/09 | 7440-39-3 | Barium | 48.6 | | | |
| 07/31/09 | 7440-02-0 | Nickel | 15.1 | | | |
| 07/31/09 | 7440-09-7 | Potassium | 2180 | | | |
| 07/31/09 | 7440-41-7 | Beryllium | 0.86 | | | |
| 07/31/09 | 7782-49-2 | Selenium | 2.4 | U | | U |
| 07/31/09 | 7440-22-4 | Silver | 0.60 | U | | U |
| 07/31/09 | 7440-23-5 | Sodium | 33.9 | B | | B |
| 07/31/09 | 7440-28-0 | Thallium | 2.4 | U | | U |
| 07/31/09 | 7440-62-2 | Vanadium | 44.3 | | | |
| 07/31/09 | 7440-66-6 | Zinc | 32.2 | | | |
| 07/31/09 | 7440-47-3 | Chromium | 40.7 | | | |
| 07/31/09 | 7440-43-9 | Cadmium | 0.36 | U | | U |
| 07/31/09 | 7440-70-2 | Calcium | 1090 | | | |
| 07/31/09 | 7440-48-4 | Cobalt | 10.7 | | | |
| 07/31/09 | 7440-50-8 | Copper | 14 | | | |
| 07/31/09 | 7429-90-5 | Aluminum | 17300 | | | |
| 08/04/09 | Q1028 | Percent Moisture | 17.2 | | | |

**Appendix B-1**
**FLFA Laboratory Data**

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 17 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 17 |
| UG/KG | 1 | 13 | 40 | PP01 | N | T | D | 17 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 17 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 17 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 17 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 17 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 17 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 17 |
| MG/KG | 1 | 1.1 | 1.8 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 1.6 | 2.5 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 3.7 | 12.1 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.40 | 2.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 9.0 | 60.3 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.40 | 1.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 30.1 | 121 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 1.7 | 2.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 30.1 | 603 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 1.0 | 2.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.72 | 3.6 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.40 | 1.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 30.1 | 121 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.30 | 0.72 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 6.8 | 25.3 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.092 | 1.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.13 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.14 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.12 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.11 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.13 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.097 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.11 | 13.0 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.10 | 1.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.13 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.12 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.11 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.051 | 1.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.051 | 1.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.14 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.14 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.053 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.050 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.41 | 6.3 | PP01 | N | T | D | 22 |

**Appendix B-1**
**FLFA Laboratory Data**

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| PG/G | 0.98 | 0.41 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.54 | 13.0 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.11 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.12 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.058 | 6.3 | PP01 | N | T | D | 22 |
| PG/G | 0.98 | 0.052 | 6.3 | PP01 | N | T | D | 22 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 22 |
| MG/KG | 1 | 0.011 | 0.051 | PP01 | N | T | D | 22 |
| UG/KG | 1 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 1 | 13 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 1 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 1 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 1 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 1 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 1 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 22 |
| MG/KG | 1 | 1.2 | 1.9 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 1.7 | 2.7 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 4.0 | 12.8 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.42 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 9.6 | 64.1 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.42 | 1.5 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.51 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.38 | 1.3 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 32.0 | 128 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.13 | 0.38 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 1.8 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.13 | 0.64 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 32.0 | 641 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 1.1 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.38 | 1.3 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.77 | 3.8 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.42 | 1.5 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.13 | 0.38 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 32.0 | 128 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.32 | 0.77 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.64 | 3.2 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 7.2 | 26.9 | PP01 | N | T | D | 22 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 22 |
| MG/KG | 1 | 0.011 | 0.052 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 13 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | NA | NA | PP01 | Y | T | D | 22 |
| MG/KG | 1 | 1.2 | 1.9 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 1.7 | 2.7 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 4.0 | 12.9 | PP01 | N | T | D | 22 |

**Appendix B-1**
**FLFA Laboratory Data**

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| MG/KG | 1 | 0.43 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 9.7 | 64.5 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.43 | 1.5 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.52 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.39 | 1.3 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 32.2 | 129 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.13 | 0.39 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 1.8 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.13 | 0.64 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 32.2 | 645 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 1.1 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.39 | 1.3 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.77 | 3.9 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.43 | 1.5 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.13 | 0.39 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 32.2 | 129 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.32 | 0.77 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.64 | 3.2 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 7.2 | 27.1 | PP01 | N | T | D | 22 |
| PG/G | 0.97 | 0.071 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.052 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.055 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.035 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.033 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.038 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.055 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.078 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.055 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.053 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.034 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.061 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.038 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.038 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.097 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.097 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.053 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.050 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.55 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.55 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.85 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.031 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.069 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.058 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.97 | 0.052 | 6.0 | PP01 | N | T | D | 18 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| MG/KG | 1 | 0.011 | 0.049 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 13 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 10 | 40 | PP01 | N | T | D | 18 |

**Appendix B-1**
**FLFA Laboratory Data**

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| UG/KG | 0.99 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 0.99 | NA | NA | PP01 | Y | T | D | 18 |
| MG/KG | 1 | 1.2 | 1.8 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 1.6 | 2.6 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 3.8 | 12.3 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.40 | 2.5 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 9.2 | 61.3 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.40 | 1.5 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.49 | 2.5 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 30.7 | 123 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 1.7 | 2.5 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 30.7 | 613 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 1.0 | 2.5 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.37 | 1.2 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.74 | 3.7 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.40 | 1.5 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.12 | 0.37 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 30.7 | 123 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.31 | 0.74 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.61 | 3.1 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 6.9 | 25.8 | PP01 | N | T | D | 18 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 22 |
| MG/KG | 1 | 0.011 | 0.051 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 13 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | 11 | 42 | PP01 | N | T | D | 22 |
| UG/KG | 0.99 | NA | NA | PP01 | Y | T | D | 22 |
| MG/KG | 1 | 1.2 | 1.9 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 1.7 | 2.7 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 4.0 | 12.8 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.42 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 9.6 | 64.0 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.42 | 1.5 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.51 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.38 | 1.3 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 32.0 | 128 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.13 | 0.38 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 1.8 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.13 | 0.64 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 32.0 | 640 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 1.1 | 2.6 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.38 | 1.3 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.77 | 3.8 | PP01 | N | T | D | 22 |

**Appendix B-1**
**FLFA Laboratory Data**

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| MG/KG | 1 | 0.42 | 1.5 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.13 | 0.38 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 32.0 | 128 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.32 | 0.77 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 0.64 | 3.2 | PP01 | N | T | D | 22 |
| MG/KG | 1 | 7.2 | 26.9 | PP01 | N | T | D | 22 |
| PG/G | 0.99 | 0.078 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.089 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.095 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.054 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.052 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.060 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.076 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.10 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.062 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.092 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.053 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.085 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.043 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.043 | 1.2 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.12 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.12 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.097 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.091 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.47 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.47 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 1.0 | 12.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.048 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.096 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.11 | 6.0 | PP01 | N | T | D | 18 |
| PG/G | 0.99 | 0.094 | 6.0 | PP01 | N | T | D | 18 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 18 |
| MG/KG | 1 | 0.010 | 0.049 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 13 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 1 | 10 | 40 | PP01 | N | T | D | 18 |
| UG/KG | 1 | NA | NA | PP01 | Y | T | D | 18 |
| MG/KG | 1 | 1.1 | 1.8 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 1.6 | 2.5 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 3.8 | 12.1 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.40 | 2.4 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 9.1 | 60.7 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.40 | 1.5 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.49 | 2.4 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 30.3 | 121 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 18 |

**Appendix B-1**
**FLFA Laboratory Data**

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| MG/KG | 1 | 1.7 | 2.4 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.12 | 0.61 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 30.3 | 607 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 1.0 | 2.4 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.73 | 3.6 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.40 | 1.5 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 30.3 | 121 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.30 | 0.73 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 0.61 | 3.0 | PP01 | N | T | D | 18 |
| MG/KG | 1 | 6.8 | 25.5 | PP01 | N | T | D | 18 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 16 |
| MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 16 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 16 |
| UG/KG | 0.99 | 12 | 39 | PP01 | N | T | D | 16 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 16 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 16 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 16 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 16 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 16 |
| UG/KG | 0.99 | NA | NA | PP01 | Y | T | D | 16 |
| MG/KG | 1 | 1.1 | 1.8 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 1.6 | 2.5 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 3.7 | 12.0 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.40 | 2.4 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 9.0 | 59.9 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.40 | 1.4 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 29.9 | 120 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 1.7 | 2.4 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 29.9 | 599 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 1.0 | 2.4 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.72 | 3.6 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.40 | 1.4 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 29.9 | 120 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.30 | 0.72 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 16 |
| MG/KG | 1 | 6.7 | 25.1 | PP01 | N | T | D | 16 |
| PG/G | 0.98 | 0.040 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.050 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.053 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.022 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.021 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.024 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.034 | 5.9 | PP01 | N | T | D | 17 |

**Appendix B-1**
**FLFA Laboratory Data**

| Units | Dilution | MDL | MRL | Res_Code | Surrog Flag | PF_Code | Basis | Moisture |
|---|---|---|---|---|---|---|---|---|
| PG/G | 0.98 | 0.064 | 12.0 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.040 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.051 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.021 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.038 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.041 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.041 | 1.2 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.11 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.11 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.036 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.034 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.094 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.094 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.14 | 12.0 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.019 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.043 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.039 | 5.9 | PP01 | N | T | D | 17 |
| PG/G | 0.98 | 0.035 | 5.9 | PP01 | N | T | D | 17 |
| % | 1 | 0.1 | 0.1 | PP01 | N | T | W | 17 |
| MG/KG | 1 | 0.010 | 0.048 | PP01 | N | T | D | 17 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 17 |
| UG/KG | 0.99 | 13 | 39 | PP01 | N | T | D | 17 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 17 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 17 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 17 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 17 |
| UG/KG | 0.99 | 10 | 39 | PP01 | N | T | D | 17 |
| UG/KG | 0.99 | NA | NA | PP01 | Y | T | D | 17 |
| MG/KG | 1 | 1.1 | 1.8 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 1.6 | 2.5 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 3.7 | 12.1 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.40 | 2.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 9.0 | 60.3 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.40 | 1.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.48 | 2.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 30.1 | 121 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 1.7 | 2.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.12 | 0.60 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 30.1 | 603 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 1.0 | 2.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.36 | 1.2 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.72 | 3.6 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.40 | 1.4 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.12 | 0.36 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 30.1 | 121 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.30 | 0.72 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 0.60 | 3.0 | PP01 | N | T | D | 17 |
| MG/KG | 1 | 6.8 | 25.3 | PP01 | N | T | D | 17 |
| % | 1 | 0.1 | 0.1 | PD01 | N | T | W | 17 |

# Appendix B-2

# Data Validation

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – Dioxin Furans
Test America Laboratories, Inc., SDG G9G300243

**DATE:** August 24, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for FLFA Removal Action on July 27, 2009 and July 28, 2009. The samples were analyzed for Dioxin Furan compounds using USEPA SW-846 Method 8290 High Resolution Gas Chromatography/High Resolution Mass Spectroscopy (HRGC/HRMS). A total of four soil samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| LFSC02/FLFA-FL-9-0-1' | G9G300243-002 | LFSC06/FLFA-SW-10-01' | G9G300243-006 |
| LFSC04/FLFA-FL-18-1-2' | G9G300243-004 | TMSC01 | G9G300243-008 |

No field soil sample duplicate pair was collected due to field error. Only sample duplicate pair TMSC01 (G9G300243-008) was collected. This sample should be used for evaluation of LFSC07/FLFA-FL-7-2-3' (G9G300243-007) for dioxin and furans. Data were reviewed and validated using a combination of project QAPP, *DOD Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *USEPA Region III Dioxin/Furan Data Validation Guidance* (March, 1999). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| X | | Blank Analysis |
| | X | Instrument Performance Check |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Internal Standards (IS) Recovery Standard Solutions |
| | X | Cleanup Standards |
| | X | Laboratory Control Standard or Ongoing Precision Result (OPR) |
| | X | Matrix Spike and Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

8/24/09
Date

**RFAAP VALIDATION REPORT**
**DIOXIN FURAN REVIEW**
**SDG G9G300243**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, dioxin and furans are shipped cooled (@4°C ± 2°C) with a maximum holding time of 30 days from sample collection to preparative extraction and 45 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 07/27/09 and 07/28/09, the cooler was received by the primary laboratory (Test America) on 07/30/09 at 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: For the soil samples collected 07/27/09 and 07/28/09, the dioxins and furans were extracted on 07/30/09 and analyzed on 07/31/09 and 08/01/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Blank Analysis**
The purpose of laboratory (or field) blank analyses is to determine the existence and magnitude of contamination problems resulting from field and laboratory activities. No contamination should be found in any of the blanks >EDL (estimated detection limit). The DoD QSM criteria specifies all concentrations should be less than ½ MRL (<MRL for common laboratory contaminants OCDD and OCDF) and <2*EDL for the calibration blanks. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤10 times (10x) the maximum amount in any blank for the common laboratory contaminants OCDD or OCDF, or 5 times (5X) the maximum amount for other target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 100) if needed. The rinse blank 072909R (G9G300253-001) applies to the soil samples in this SDG.

## Table 2 Blank Contamination Analysis Summary

| Analysis Date | QC Blank ID | Compound | Max Conc. pg/g | Action Level pg/g | B qualified samples |
|---|---|---|---|---|---|
| 07/31/09 | G9G300000-459B | 2,3,7,8-TCDF | 0.18J | 0.90 | LFSC04/FLFA-FL-18-1-2', LFSC06/FLFA-SW-10-01', TMSC01 |
| 07/31/09 | G9G300000-459B | 1,2,3,7,8-PeCDF | 0.12J | 0.60 | LFSC04/FLFA-FL-18-1-2', LFSC06/FLFA-SW-10-01', TMSC01 |
| 07/31/09 | G9G300000-459B | 2,3,4,7,8-PeCDF | 0.096JQ | 0.48 | LFSC04/FLFA-FL-18-1-2', LFSC06/FLFA-SW-10-01', TMSC01 |
| 07/31/09 | G9G300000-459B | 1,2,3,4,7,8-HxCDF | 0.11JQ | 0.55 | TMSC01 |
| 07/31/09 | G9G300000-459B | 2,3,4,6,7,8-HxCDF | 0.091J | 0.46 | LFSC04/FLFA-FL-18-1-2', LFSC06/FLFA-SW-10-01', TMSC01 |
| 07/31/09 | G9G300000-459B | 1,2,3,4,6,7,8-HpCDF | 0.080JQ | 0.40 | TMSC01 |
| 07/31/09 | G9G300000-459B | OCDF | 0.097J | 0.97 | TMSC01 |
| 07/31/09 | G9G300000-459B | 2,3,7,8-TCDD | 0.028JQ | 0.14 | LFSC06/FLFA-SW-10-01' |
| 07/31/09 | G9G300000-459B | 1,2,3,4,6,7,8-HpCDD | 0.15J | 0.75 | None |
| 07/31/09 | G9G300000-459B | OCDD | 1.6J | 16.0 | None |
| 07/31/09 | G9G300000-459B | 1,2,3,6,7,8-HxCDF | 0.051J | 0.26 | TMSC01 |
| 07/31/09 | G9G300000-459B | 1,2,3,4,7,8,9-HpCDF | 0.066JQ | 0.33 | TMSC01 |
| 07/31/09 | G9G300000-459B | Total TCDD | 0.028 | 0.14 | None |
| 07/31/09 | G9G300000-459B | Total PeCDD | 0.063 | 0.32 | None |
| 07/31/09 | G9G300000-459B | Total HxCDD | 0.10 | 0.50 | TMSC01 |
| 07/31/09 | G9G300000-459B | Total HpCDD | 0.36 | 1.80 | None |
| 07/31/09 | G9G300000-459B | Total TCDF | 0.26 | 1.30 | TMSC01 |
| 07/31/09 | G9G300000-459B | Total PeCDF | 0.55 | 2.75 | TMSC01 |
| 07/31/09 | G9G300000-459B | Total HxCDF | 0.58 | 2.90 | TMSC01 |
| 07/31/09 | G9G300000-459B | Total HpCDF | 0.21 | 1.05 | TMSC01 |
| 07/31/09 | 072909R | 1,2,3,4,7,8-HxCDF | 0.011JQB | 0.055 | None |
| 07/31/09 | 072909R | 1,2,3,7,8,9-HxCDF | 0.0043JQB | 0.0215 | None |
| 07/31/09 | 072909R | 1,2,3,4,6,7,8-HpCDF | 0.013JB | 0.065 | None |
| 07/31/09 | 072909R | OCDF | 0.021JB | 0.21 | TMSC01 |
| 07/31/09 | 072909R | Total HxCDF | 0.026 | 0.13 | None |
| 07/31/09 | 072909R | Total HpCDF | 0.043 | 0.215 | None |
| 07/31/09 | 072909R | Total HpCDD | 0.051 | 0.255 | None |
| 07/31/09 | 072909R | 1,2,3,4,6,7,8-HpCDD | 0.022JB | 0.11 | None |
| 07/31/09 | 072909R | OCDD | 0.17JB | 1.7 | None |
| 07/31/09 | 072909R | 1,2,3,4,7,8,9-HpCDF | 0.015JB | 0.075 | TMSC01 |
| 07/31/09 | 072909R | 1,2,3,4,7,8-HxCDF | 0.011JQB | 0.055 | None |
| 07/31/09 | 072909R | 1,2,3,7,8,9-HxCDF | 0.0043JQB | 0.0215 | None |
| 07/31/09 | 072909R | 1,2,3,4,6,7,8-HpCDF | 0.013JB | 0.065 | None |

J = Estimated value >EDL and <MRL.
Q = Estimated maximum possible concentration (EMPC).
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

### III-Instrument Performance Check

Instrument must be tuned with perfluorokerosene (PFK) to achieve a static resolving power of at least 10,000 (10% valley) and lock-mass ion between lowest and highest masses for each descriptor and level of reference compound ≤10%. Documentation of the mass spectrometer resolving power is accomplished by recording the peak profile of the high-mass reference signal (typically m/z 330.9792) obtained during a peak examination by using the low-mass PFK ion at m/z 292.9825 or lower in mass as reference. At the beginning of the each 12-hour period, the chromatographic resolution is verified in the same fashion as in the initial calibration through the analysis of HRCC solution on the DB-5 (or equivalent) column or through the analysis of the column performance solution on the SP-2331 or SP-225 (or equivalent) column. A 25% valley must be achieved between the close eluters.

- All PFK forms were verified and found to be in compliance with method specification. No qualifiers were applied.

**IV-Initial Calibration**
Once the window defining mix has been analyzed and the descriptor switching times have been verified, the five point calibration solutions can be analyzed prior to sample analysis. Per method and DoD QSM, the initial calibration criteria are as follows:

- The percent relative standard deviations for the mean response factors RRF(n) from the 17 unlabeled standards must not exceed ±20%, and those for the labeled reference compounds must not exceed ±30%;
- The signal to noise ratio ≥10% for all target ions;
- Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For initial calibration performed on 07/31/09 for all target compounds on instrument 4D5, all criteria were met. No qualifiers were applied. Samples LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC06/FLFA-SW-10-01' (G9G300243-006), and TMSC01 (G9G300243-008) apply to this initial calibration.

- For initial calibration performed on 07/23/09 for all target compounds on instrument 4D5, all criteria were met. No qualifiers were applied. Confirmations for samples LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC06/FLFA-SW-10-01' (G9G300243-006), and TMSC01 (G9G300243-008) apply to this initial calibration.

- For 2,3,7,8-TCDF initial calibration performed on 07/07/09 for all target compounds on instrument 4D5, all criteria were met. No qualifiers were applied. Confirmations for 2,3,7,8-TCDF for samples LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC06/FLFA-SW-10-01' (G9G300243-006), and TMSC01 (G9G300243-008) apply to this initial calibration.

**V-Continuing Calibration**
The continuing calibration consists of two parts: evaluation of the mass resolution and retention time check. Per method and DoD QSM, the following stipulates the continuing calibration criteria.

- The signal signal-to-noise ratio (S/N) must be at least 10:1 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard for each analyte.
- The relative response factor of each analyte for the unlabeled standard must be within ±20% of the average RF obtained from the initial calibration, and the RRF of each labeled standard must be within ±30% of the average RRF established during initial calibration. This is expressed in term of percent difference %D.
- Ion abundance ratios must be within the specified control limits in Table 8 (SW846 Method 8290).

- For continuing calibration performed on 07/31/09 @18:51 on instrument 4D5, all criteria were met. No qualifiers were applied. Samples LFSC02/FLFA-FL-9-0-1' (G9G300243-002) and LFSC04/FLFA-FL-18-1-2' (G9G300243-004) apply to this continuing calibration.

- For continuing calibration performed on 08/01/09 @02:12 on instrument 4D5, all criteria were met. No qualifiers were applied. Samples LFSC06/FLFA-SW-10-01' (G9G300243-006) and TMSC01 (G9G300243-008) apply to this continuing calibration.

**VI-Internal Standards (IS) Recovery Standard Solutions**
Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. Specific criteria include: Recoveries of the isotopically-labeled recovery standards to fall within the 40 to 135 percent range for the tetra- through octachlorinated congeners, or as stated in the data package (DoD QSM limits 40-135%).

- All criteria were met. No qualifiers were applied.

**VII-Cleanup Standards**
Cleanup standards are added to every sample, blank, quality control sample, and calibration solution. This compound is added to the samples after extraction but prior to cleanup and is used to verify the percent recovery obtained using the isotope dilution technique. The control limits are 40 to 135 percent (DoD QSM limits 40-135%).

- All criteria were met. No qualifiers were applied.

**VIII-Laboratory Control Standard (LCS) or Ongoing Precision Result (OPR)**
LCSs are used to monitor laboratory accuracy and precision by calculating the percent recoveries of the spiked compounds. Per DOD QSM and method criteria, acceptable performance is determined by:

1. Recoveries of the isotopically-labeled extraction standards to fall within 40-135% control limits for the tetra- through octachlorinated congeners, or as stated in the data package;

2. Recoveries (accuracy) of the unlabeled compounds should be within $\pm$35% when spiked at the method quantitation limit and within $\pm$30% when spiked above 20 times the method quantitation limit, or as stated in the data package;

3. When duplicate OPR are required, the relative percent difference (RPD) of the unlabeled analytes concentrations should be within 30% when spiked at the method quantitation limit and within $\pm$20% when spiked above 20 times the method quantitation limit.

- Sample G9G300000-459 was used as LCS on 07/31/09 analytical run. All criteria were met. No qualifiers were applied. Samples LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC06/FLFA-SW-10-01' (G9G300243-006), and TMSC01 (G9G300243-008) apply to this LCS.

**IX-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. Per DoD QSM, MS/MSD recoveries must be within in-house laboratory limits (75-125%) and RPD $\leq$20%.

- No project specific soil matrix MS/MSD was performed in this SDG; therefore, it was not evaluated.

**X-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid matrix samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- No field soil sample duplicate pair was collected due to field error. Only sample duplicate pair TMSC01 (G9G300243-008) was collected. This sample should be used for evaluation of LFSC07/FLFA-FL-7-2-3' (G9G300243-007) for dioxin and furans.

**XI-Quantitation Verification**
The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification. Any value reported by the laboratory as estimated based on an analyte to internal standard ratio below the calibration curve was qualified as estimated "J". The signal signal-to-noise ratio (S/N) must be greater than 2.5 for each selected ion current profile (SICP) and for each GC signal representing the elution of a target analyte or labeled standard. Any detected value with ether interference was qualified as estimated "J". For where the ion ratio failed the 25% criteria (Q-lab flag), the estimated maximum possible concentration (EMPC) was reported and flagged estimated "J". For where presence of quantitation interference, the date was flagged estimated "J" for detects and "UJ" for non-detects.

**Sample: LFSC02/FLFA-FL-9-0-1' (G9G300243-002), OCDD**

A(x) = sum of the integrated ion abundances of the quantitation ions for the unlabeled ions;

A(is) = sum of the integrated ion abundances of the quantitation ions for the labeled ions;

Q(is) = quantity, in pg, of the internal standard added to the sample before extraction; Here need to multiply concentration (pg/uL) by final extract volume (uL).

W = weight, in g, of the sample (solid or organic liquid) as dry weight, or volume in mL of an aqueous sample; and

Avg. RRF(n) = calculated mean relative response factor for the unlabeled analyte.

$$\text{Conc. (ng/kg)} = \frac{(A(x))*Q(is)}{A(is) * W * \text{Avg. RRF}} = \frac{(1252045000)*4.0*1000}{(193524000) * (10.12 * 0.7800) * 1.061} =$$

= 3100 ng/kg = 3100 pg/g

Reported Value = 3100 pg/g
% Difference = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% RPD for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitaion limit may be inaccurate or imprecise. |
| N | Tenative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identificaition questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitaion limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from USEPA Region III Dioxin/Furan Data Validation Guidance (March, 1999) and Region III Modifications to the National Functional Guidelines for Organic Data Review (September 1994).

# Form I Copy

Shaw E & I Inc

Sample ID: LFSC02/FLFA-FL-9-0-1'

Trace Level Organic Compounds

SW846 8290

| | | | | | |
|---|---|---|---|---|---|
| Lot - Sample #....: | G9G300243 - 002 | Work Order #....: | LHADH1AH | Matrix....: | SO |
| Date Sampled....: | 07/27/09 | Date Received....: | 07/30/09 | Dilution Factor: | 0.98 |
| Prep Date....: | 07/30/09 | Analysis Date....: | 07/31/09 | Percent Moisture: | 22 |
| Prep Batch # ....: | 9211459 | Instrument ID....: | 4D5 | | |
| Initial Wgt/Vol : | 10.12 g | Analyst ID....: | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.64 | J B J | 1.3 | 0.051 | pg/g |
| Total TCDD | 11 | | 1.3 | 0.051 | pg/g |
| 1,2,3,7,8-PeCDD | 1.5 | J J | 6.3 | 0.14 | pg/g |
| Total PeCDD | 18 | | 6.3 | 0.14 | pg/g |
| 1,2,3,4,7,8-HxCDD | 1.4 | J J | 6.3 | 0.058 | pg/g |
| 1,2,3,6,7,8-HxCDD | 2.9 | J J | 6.3 | 0.052 | pg/g |
| 1,2,3,7,8,9-HxCDD | 4.7 | J J | 6.3 | 0.050 | pg/g |
| Total HxCDD | 34 | | 6.3 | 0.053 | pg/g |
| 1,2,3,4,6,7,8-HpCDD | 51 | B | 6.3 | 0.41 | pg/g |
| Total HpCDD | 100 | | 6.3 | 0.41 | pg/g |
| OCDD | 3100 | B | 13 | 0.54 | pg/g |
| 2,3,7,8-TCDF | 4.5 | CON B | 1.3 | 0.092 | pg/g |
| Total TCDF | 56 | | 1.3 | 0.10 | pg/g |
| 1,2,3,7,8-PeCDF | 3.2 | J B J | 6.3 | 0.13 | pg/g |
| 2,3,4,7,8-PeCDF | 5.5 | J B J | 6.3 | 0.14 | pg/g |
| Total PeCDF | 55 | | 6.3 | 0.13 | pg/g |
| 1,2,3,4,7,8-HxCDF | 7.1 | B | 6.3 | 0.12 | pg/g |
| 1,2,3,6,7,8-HxCDF | 5.1 | J B J | 6.3 | 0.11 | pg/g |
| 2,3,4,6,7,8-HxCDF | 6.1 | J B J | 6.3 | 0.11 | pg/g |
| 1,2,3,7,8,9-HxCDF | 0.33 | J J | 6.3 | 0.13 | pg/g |
| Total HxCDF | 51 | | 6.3 | 0.12 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | 28 | B | 6.3 | 0.097 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | 2.5 | J B J | 6.3 | 0.12 | pg/g |
| Total HpCDF | 45 | | 6.3 | 0.11 | pg/g |
| OCDF | 21 | B | 13 | 0.11 | pg/g |

# Form I Copy

Shaw E & I Inc

Sample ID: LFSC02/FLFA-FL-9-0-1'

Trace Level Organic Compounds

SW846 8290

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9G300243 - 002 | **Work Order #....:** | LHADH1AH | **Matrix....:** | SO |
| **Date Sampled....:** | 07/27/09 | **Date Received....:** | 07/30/09 | **Dilution Factor:** | 0.98 |
| **Prep Date....:** | 07/30/09 | **Analysis Date....:** | 07/31/09 | **Percent Moisture:** | 22 |
| **Prep Batch # ....:** | 9211459 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.12 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 83 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 79 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 89 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 86 | 40 - 135 |
| 13C-OCDD | 85 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 78 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 74 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 76 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 77 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination. The associated method blank contains the target analyte at a reportable level

CON Confirmation analysis.

J Estimated Result

# Form I Copy

Shaw E & I Inc

Sample ID: LFSC04/FLFA-FL-18-1-2'

Trace Level Organic Compounds

SW846 8290

| | | | | | |
|---|---|---|---|---|---|
| Lot - Sample #....: | G9G300243 - 004 | Work Order #....: | LHADN1AP | Matrix....: | SO |
| Date Sampled....: | 07/28/09 | Date Received....: | 07/30/09 | Dilution Factor: | 0.97 |
| Prep Date....: | 07/30/09 | Analysis Date....: | 07/31/09 | Percent Moisture: | 18 |
| Prep Batch # ....: | 9211459 | Instrument ID....: | 4D5 | | |
| Initial Wgt/Vol : | 10.23 g | Analyst ID....: | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.26 | J B J | 1.2 | 0.038 | pg/g |
| Total TCDD | 1.7 | | 1.2 | 0.038 | pg/g |
| 1,2,3,7,8-PeCDD | 0.40 | J J | 6.0 | 0.097 | pg/g |
| Total PeCDD | 2.6 | | 6.0 | 0.097 | pg/g |
| 1,2,3,4,7,8-HxCDD | 0.46 | J J | 6.0 | 0.058 | pg/g |
| 1,2,3,6,7,8-HxCDD | 1.1 | J J | 6.0 | 0.052 | pg/g |
| 1,2,3,7,8,9-HxCDD | 1.3 | J J | 6.0 | 0.050 | pg/g |
| Total HxCDD | 10 | | 6.0 | 0.053 | pg/g |
| 1,2,3,4,6,7,8-HpCDD | 48 | B | 6.0 | 0.55 | pg/g |
| Total HpCDD | 88 | | 6.0 | 0.55 | pg/g |
| OCDD | 4400 | B | 12 | 0.85 | pg/g |
| 2,3,7,8-TCDF | 0.58 | J CON B B | 1.2 | 0.071 | pg/g |
| Total TCDF | 4.3 | | 1.2 | 0.055 | pg/g |
| 1,2,3,7,8-PeCDF | 0.33 | J B B | 6.0 | 0.052 | pg/g |
| 2,3,4,7,8-PeCDF | 0.39 | J Q B B | 6.0 | 0.055 | pg/g |
| Total PeCDF | 4.4 | | 6.0 | 0.053 | pg/g |
| 1,2,3,4,7,8-HxCDF | 1.2 | J B J | 6.0 | 0.035 | pg/g |
| 1,2,3,6,7,8-HxCDF | 0.48 | J B J | 6.0 | 0.031 | pg/g |
| 2,3,4,6,7,8-HxCDF | 0.40 | J B B | 6.0 | 0.033 | pg/g |
| 1,2,3,7,8,9-HxCDF | 0.044 | J J | 6.0 | 0.038 | pg/g |
| Total HxCDF | 11 | | 6.0 | 0.034 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | 8.5 | B | 6.0 | 0.055 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | 0.61 | J B J | 6.0 | 0.069 | pg/g |
| Total HpCDF | 28 | | 6.0 | 0.061 | pg/g |
| OCDF | 27 | B | 12 | 0.078 | pg/g |

# Form I Copy

Shaw E & I Inc

Sample ID: LFSC04/FLFA-FL-18-1-2'

Trace Level Organic Compounds

SW846 8290

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9G300243 - 004 | **Work Order #....:** | LHADN1AP | **Matrix....:** | SO |
| **Date Sampled....:** | 07/28/09 | **Date Received....:** | 07/30/09 | **Dilution Factor:** | 0.97 |
| **Prep Date....:** | 07/30/09 | **Analysis Date....:** | 07/31/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9211459 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.23 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 87 | 40 - 135 |
| 13C-1,2.3,7,8-PeCDD | 81 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 96 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 90 | 40 - 135 |
| 13C-OCDD | 104 | 40 - 135 |
| 13C-2,3.7,8-TCDF | 81 | 40 - 135 |
| 13C-1,2.3,7,8-PeCDF | 77 | 40 - 135 |
| 13C-1,2.3,4,7,8-HxCDF | 84 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 88 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination. The associated method blank contains the target analyte at a reportable level

CON Confirmation analysis.

J Estimated Result

Q Estimated maximum possible concentration (EMPC).

# Form I Copy

**Shaw E & I Inc**

**Sample ID: LFSC06/FLFA-SW-10-01'**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| *Lot - Sample #....:* | G9G300243 - 006 | Work Order #....: | LHADT1AP | Matrix....: | SO |
| Date Sampled....: | 07/27/09 | Date Received....: | 07/30/09 | Dilution Factor: | 0.99 |
| Prep Date....: | 07/30/09 | Analysis Date....: | 08/01/09 | Percent Moisture: | 18 |
| Prep Batch # ....: | 9211459 | Instrument ID....: | 4D5 | | |
| Initial Wgt/Vol : | 10.06 g | Analyst ID....: | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.13 | J Q B B | 1.2 | 0.043 | pg/g |
| Total TCDD | 1.5 | | 1.2 | 0.043 | pg/g |
| 1,2,3,7,8-PeCDD | 0.38 | J J | 6.0 | 0.12 | pg/g |
| Total PeCDD | 2.2 | | 6.0 | 0.12 | pg/g |
| 1,2,3,4,7,8-HxCDD | 0.50 | J Q J | 6.0 | 0.11 | pg/g |
| 1,2,3,6,7,8-HxCDD | 1.1 | J J | 6.0 | 0.094 | pg/g |
| 1,2,3,7,8,9-HxCDD | 1.2 | J J | 6.0 | 0.091 | pg/g |
| Total HxCDD | 9.6 | | 6.0 | 0.097 | pg/g |
| 1,2,3,4,6,7,8-HpCDD | 47 | B | 6.0 | 0.47 | pg/g |
| Total HpCDD | 86 | | 6.0 | 0.47 | pg/g |
| OCDD | 4500 | B | 12 | 1.0 | pg/g |
| 2,3,7,8-TCDF | 0.61 | J CON B B | 1.2 | 0.078 | pg/g |
| Total TCDF | 6.3 | | 1.2 | 0.062 | pg/g |
| 1,2,3,7,8-PeCDF | 0.33 | J B B | 6.0 | 0.089 | pg/g |
| 2,3,4,7,8-PeCDF | 0.46 | J B B | 6.0 | 0.095 | pg/g |
| Total PeCDF | 4.7 | | 6.0 | 0.092 | pg/g |
| 1,2,3,4,7,8-HxCDF | 1.0 | J B J | 6.0 | 0.054 | pg/g |
| 1,2,3,6,7,8-HxCDF | 0.52 | J B J | 6.0 | 0.048 | pg/g |
| 2,3,4,6,7,8-HxCDF | 0.38 | J B B | 6.0 | 0.052 | pg/g |
| 1,2,3,7,8,9-HxCDF | ND | | 6.0 | 0.060 | pg/g |
| Total HxCDF | 10 | | 6.0 | 0.053 | pg/g |
| 1,2,3,4,6,7,8-HpCDF | 8.0 | B | 6.0 | 0.076 | pg/g |
| 1,2,3,4,7,8,9-HpCDF | 0.61 | J B J | 6.0 | 0.096 | pg/g |
| Total HpCDF | 30 | | 6.0 | 0.085 | pg/g |
| OCDF | 25 | B | 12 | 0.10 | pg/g |

# Form I Copy

Shaw E & I Inc

Sample ID: LFSC06/FLFA-SW-10-01'

Trace Level Organic Compounds

SW846 8290

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9G300243 - 006 | **Work Order #....:** | LHADT1AP | **Matrix....:** | SO |
| **Date Sampled....:** | 07/27/09 | **Date Received....:** | 07/30/09 | **Dilution Factor:** | 0.99 |
| **Prep Date....:** | 07/30/09 | **Analysis Date....:** | 08/01/09 | **Percent Moisture:** | 18 |
| **Prep Batch # ....:** | 9211459 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.06 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 84 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 78 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 86 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 94 | 40 - 135 |
| 13C-OCDD | 104 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 80 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 77 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 83 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 84 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination. The associated method blank contains the target analyte at a reportable level

CON Confirmation analysis.

J Estimated Result

Q Estimated maximum possible concentration (EMPC)

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# Form I Copy

**Shaw E & I Inc**

**Sample ID: TMSC01**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9G300243 - 008 | **Work Order #....:** | LHADX1AP | **Matrix....:** | SO |
| **Date Sampled....:** | 07/28/09 | **Date Received....:** | 07/30/09 | **Dilution Factor:** | 0.98 |
| **Prep Date....:** | 07/30/09 | **Analysis Date....:** | 08/01/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9211459 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.16 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| PARAMETER | RESULT | | REPORTING LIMIT | ESTIMATED DETECTION LIMIT | UNITS |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | | 1.2 | 0.041 | pg/g |
| Total TCDD | ND | | 1.2 | 0.041 | pg/g |
| 1,2,3,7,8-PeCDD | ND | | 5.9 | 0.11 | pg/g |
| Total PeCDD | ND | | 5.9 | 0.11 | pg/g |
| **1,2,3,4,7,8-HxCDD** | **0.057** | **J** J | **5.9** | **0.039** | **pg/g** |
| **1,2,3,6,7,8-HxCDD** | **0.070** | **J** J | **5.9** | **0.035** | **pg/g** |
| **1,2,3,7,8,9-HxCDD** | **0.10** | **J** J | **5.9** | **0.034** | **pg/g** |
| **Total HxCDD** | **0.60** | B | **5.9** | **0.036** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDD** | **1.2** | **J B** J | **5.9** | **0.094** | **pg/g** |
| **Total HpCDD** | **2.8** | | **5.9** | **0.094** | **pg/g** |
| **OCDD** | **54** | **B** | **12** | **0.14** | **pg/g** |
| **2,3,7,8-TCDF** | **0.13** | **J Q B** B | **1.2** | **0.040** | **pg/g** |
| **Total TCDF** | **0.27** | B | **1.2** | **0.040** | **pg/g** |
| **1,2,3,7,8-PeCDF** | **0.061** | **J Q B** B | **5.9** | **0.050** | **pg/g** |
| **2,3,4,7,8-PeCDF** | **0.13** | **J Q B** B | **5.9** | **0.053** | **pg/g** |
| **Total PeCDF** | **0.65** | B | **5.9** | **0.051** | **pg/g** |
| **1,2,3,4,7,8-HxCDF** | **0.13** | **J B** B | **5.9** | **0.022** | **pg/g** |
| **1,2,3,6,7,8-HxCDF** | **0.064** | **J B** B | **5.9** | **0.019** | **pg/g** |
| **2,3,4,6,7,8-HxCDF** | **0.058** | **J B** B | **5.9** | **0.021** | **pg/g** |
| **1,2,3,7,8,9-HxCDF** | **0.033** | **J** J | **5.9** | **0.024** | **pg/g** |
| **Total HxCDF** | **0.65** | B | **5.9** | **0.021** | **pg/g** |
| **1,2,3,4,6,7,8-HpCDF** | **0.15** | **J Q B** B | **5.9** | **0.034** | **pg/g** |
| **1,2,3,4,7,8,9-HpCDF** | **0.080** | **J Q B** B | **5.9** | **0.043** | **pg/g** |
| **Total HpCDF** | **0.34** | B | **5.9** | **0.038** | **pg/g** |
| **OCDF** | **0.12** | **J Q B** B | **12** | **0.064** | **pg/g** |

# Form I Copy

**Shaw E & I Inc**

**Sample ID: TMSC01**

**Trace Level Organic Compounds**

**SW846 8290**

| | | | | | |
|---|---|---|---|---|---|
| **Lot - Sample #....:** | G9G300243 - 008 | **Work Order #....:** | LHADX1AP | **Matrix.....:** | SO |
| **Date Sampled....:** | 07/28/09 | **Date Received....:** | 07/30/09 | **Dilution Factor:** | 0.98 |
| **Prep Date....:** | 07/30/09 | **Analysis Date....:** | 08/01/09 | **Percent Moisture:** | 17 |
| **Prep Batch # ....:** | 9211459 | **Instrument ID....:** | 4D5 | | |
| **Initial Wgt/Vol :** | 10.16 g | **Analyst ID....:** | Grandfield S. Virginia | | |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 80 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDD | 77 | 40 - 135 |
| 13C-1,2,3,6,7,8-HxCDD | 100 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDD | 92 | 40 - 135 |
| 13C-OCDD | 94 | 40 - 135 |
| 13C-2,3,7,8-TCDF | 71 | 40 - 135 |
| 13C-1,2,3,7,8-PeCDF | 69 | 40 - 135 |
| 13C-1,2,3,4,7,8-HxCDF | 84 | 40 - 135 |
| 13C-1,2,3,4,6,7,8-HpCDF | 83 | 40 - 135 |

**QUALIFIERS**

Results and reporting limits have been adjusted for dry weight

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

J Estimated Result

Q Estimated maximum possible concentration (EMPC)

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – TAL Metals
Test America Laboratories, Inc., SDG G9G300243

**DATE:** August 24, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for FLFA Removal Action on July 27, 2009 and July 28, 2009. Solid samples were analyzed for target analyte list (TAL) metals using USEPA SW-846 3050B/6010B for ICP metals and SW-846 7471A for mercury. A total of eight solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| LFSC01/FLFA-FL-1-0-1' | G9G300243-001 | LFSC05/FLFA-SW-2-01' | G9G300243-005 |
| LFSC02/FLFA-FL-9-0-1' | G9G300243-002 | LFSC06/FLFA-SW-10-01' | G9G300243-006 |
| LFSC03/FLFA-FL-17-0-1' | G9G300243-003 | LFSC07/FLFA-FL-7-2-3' | G9G300243-007 |
| LFSC04/FLFA-FL-18-1-2' | G9G300243-004 | TMSC01 | G9G300243-008 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial and Continuing Calibration |
| | X | Blank Analysis |
| | X | ICP Interference Check Sample (ICS) |
| | X | Laboratory Control Sample (LCS) |
| | X | Laboratory Sample Duplicate |
| X | | Matrix Spike and Spike Duplicate |
| | X | ICP Serial Dilution |
| X | | Field Sample Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

8/24/09
Date

**RFAAP VALIDATION REPORT**
**METALS REVIEW**
**SDG G9G300243**

## I-Holding Times and Preservation

The primary objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample analysis. Holding time criteria: For solid matrices, the samples are shipped cool @4°C±2°C with a maximum holding time is 180 days for ICP metals and 28 days for mercury.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 07/27/09 and 07/28/09, the cooler was received by the primary laboratory (Test America) on 07/30/09 at 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: Samples were collected 07/27/09 and 07/28/09 for metals analysis. For solid samples, the soil samples were digested on 07/31/09 and analyzed on 07/31/09 for ICP metals. Mercury was digested on 07/30/09 and analyzed on 07/31/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

## II-Initial and Continuing Calibration

Requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

| | | | |
|---|---|---|---|
| ICP: | 1- blank (DoD QSM <½ MRL) | Hg: | 1 – blank (DoD QSM <½ MRL) |
| | 3 – standards (r≥0.995) | | 5 – standards (r≥0.995) |
| | ICV/CCV (90-110%) (DoD QSM 90-110%) | | ICV/CCV (80-120%)(DoD QSM ICV 90-110% & CCV 80-120%) |
| | MRL (70-130%) (DoD QSM 80-120%) | | MRL (80-120%) (DoD QSM 80-120%) |
| | High Std. (95-105%) | | High Std. (95-105%) |

- The solid samples were analyzed for ICP metals on 07/31/09. Mercury was analyzed for the solid samples on 07/31/09 with a correlation coefficient of 0.9999. All ICV/CCV/High Standard/MRL criteria were met for all metals and runs. No qualifiers were applied.

## III-Blanks

Blanks (preparation and calibration blanks) are assessed to determine the existence and magnitude of contamination problems. No contaminants should be detected (i.e. <MDL) in any of the associated blanks. DoD QSM limits are <½MRL for the method blank and <2*MDL for the calibration blanks. Samples are qualified "B" when they are less than 5x the absolute value of the maximum blank concentration. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 10 for ICP and Hg = 12) if needed. The rinse blank 072909R (G9G300253-001) applies to the soil samples in this SDG.

**Table 2 Blank Contamination Analysis Summary**

| Analysis Date | Analysis | QC Blank ID | Max Conc. mg/kg | Action Level mg/kg | B qualified samples |
|---|---|---|---|---|---|
| 07/31/09 | ICP Metals | ICB/CCBs | <2*MDL | NA | None |
| 07/31/09 | Mercury | ICB/CCBs | <2*MDL | NA | None |
| 07/31/09 | ICP Metals | G9G300000-345 | <1/2*MRL | NA | None |
| 07/31/09 | Mercury | G9G300000-453 | <1/2*MRL | NA | None |
| 07/31/09 | ICP Metals | 072909R | <1/2*MRL | NA | None |
| 08/04/09 | Mercury | 072909R | <1/2*MRL | NA | None |

NA = Not Applicable
MDL = Method Detection Limit.
MRL = Method Reporting Limit.

**IV-ICP Interference Check Sample (ICS)**
The ICP interference check sample (ICS) verifies interelement and background correction factors. ICP Interference Check is performed at the beginning and end of each sample analysis run. Control limits are 80-120% (DoD QSM limits 80-120%).

- All criteria were met. No qualifiers were applied.

**V-Laboratory Control Samples (LCS)**
The laboratory control sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. All aqueous LCS results must fall within the control limits. The DoD QSM solid LCS recovery limits are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9G300000-345 was used as solid LCS for ICP metals analysis on 07/31/09. All criteria were met. No qualifiers were applied. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) apply to this LCS.

- Sample G9G300000-453 was used as solid LCS for mercury analysis on 07/31/09. All criteria were met. No qualifiers were applied. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) apply to this LCS.

**VI-Laboratory Duplicate Sample Analysis**
Duplicate sample determinations are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data in order to determine the long-term precision of the analytical method on various matrices. RPDs must be within established control limits. DoD QSM limits for metals are 20% RPD for ICP metals and mercury.

- No laboratory duplicate was analyzed. Laboratory precision was evaluated using the Matrix Spike and Matrix Spike Duplicate (Section VII).

**VII-Matrix Spike/Spike Duplicate**
MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Specific criteria include the analyses of matrix spike and matrix spike duplicate samples at a frequency of one MS and MSD per 20 samples of similar matrix. MS and MSD recoveries and relative percent differences between MS and MSD recoveries should be within the specified limits. DoD QSM solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-19 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used. Post digestion spikes limits are 75-125% for ICP metals and mercury.

- Sample LFSC01/FLFA-FL-1-0-1' (G9G300243-001) was used as solid laboratory MS/MSD for ICP metals analysis on 07/31/09. Aluminum (1380%, 1170%), antimony (39%, 42%), iron (290%, 125%), and manganese (0.0%, 0.0%) were outside criteria. All other recoveries and RPD values were within criteria. The associated LCS (Section V) was within criteria. The sample concentration was >4 times the spike added for aluminum, iron, and manganese; therefore, no qualifiers were applied based upon these outliers. Antimony was qualified bias low "L" for detects and "UL" for non-detects based upon the low recoveries. All other metals were within criteria. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) apply to this MS/MSD.

- Sample LFSC05/FLFA-SW-2-01' (G9G300243-005) was used as solid MS/MSD for mercury analysis on 07/31/09. All criteria were met. No qualifiers were applied. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) apply to this MS/MSD.

**VIII-ICP Serial Dilution**

An ICP serial dilution is performed to determine whether significant physical or chemical interferences exist due to sample matrix at high concentrations. An analysis of a 5-fold dilution should agree within 10% difference of the original result when the concentration in sample is a factor of 50 above MDL.

- The serial dilution for ICP metals was analyzed on 07/31/09 using solid sample LFSC01/FLFA-FL-1-0-1' (G9G300243-001). All criteria were met. No qualifiers were applied. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) apply to this serial dilution.

- The serial dilution for mercury was analyzed on 07/31/09 using solid sample LFSC05/FLFA-SW-2-01' (G9G300243-005). Mercury (13.6%) was outside of criteria limits. Sample concentrations were <50 times MDL for mercury; therefore, no qualifiers were applied based upon this outlier. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) apply to this serial dilution.

**IX-Field Duplicate Sample Analysis**

Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 35% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- Field soil sample duplicate pair LFSC07/FLFA-FL-7-2-3' (G9G300243-007) and TMSC01 (G9G300243-008) was collected for TAL metals. All detected TAL metals found in the sample and its duplicate pair and associated %RPD are noted in **Table 4**. All other TAL metals target compounds were non-detect. Arsenic (41.4%), iron (38.3%), magnesium (36.4%), manganese (43.9%), potassium (71.7%), and cobalt (36.0%) were above criteria due to low concentration levels detected below the MRL. Arsenic, iron, magnesium, manganese, potassium, and cobalt were qualified estimated "J" for the original and duplicate pair samples based upon these outliers. For all other metals, all criteria were met.

**Table 4 Field Precision Hits Analysis Summary for TAL Metals for Duplicate Pair LFSC07/FLFA-FL-7-2-3' (G9G300243-007) and TMSC01 (G9G300243-008)**

| Compound | Original Sample (mg/kg) | Duplicate Pair (mg/kg) | %RPD |
|---|---|---|---|
| Mercury | 0.014B | 0.014B | 0.0 |
| Arsenic | 6.7 | 4.4 | 41.4 |
| Iron | 33600 | 22800 | 38.3 |
| Lead | 16.7 | 12.3 | 30.3 |
| Magnesium | 6990 | 10100 | 36.4 |
| Manganese | 798 | 511 | 43.9 |
| Barium | 52.6 | 48.6 | 7.9 |
| Nickel | 14.8 | 15.1 | 2.0 |
| Potassium | 1030 | 2180 | 71.7 |
| Beryllium | 0.93 | 0.86 | 7.8 |
| Sodium | 32.1B | 33.9B | 5.5 |
| Vanadium | 57.3 | 44.3 | 25.6 |
| Zinc | 32.3 | 32.2 | 0.3 |
| Chromium | 41.5 | 40.7 | 2.0 |
| Calcium | 1110 | 1090 | 1.8 |
| Cobalt | 15.4 | 10.7 | 36.0 |
| Copper | 12.8 | 14.0 | 9.0 |
| Aluminum | 16900 | 17300 | 2.3 |

B = Estimated value <MRL and >MDL. Data point qualified was estimated "J".

**X-Quantitation Verification**

The accuracy of analytical results is verified through the calculation of several parameters. The percent difference (%D) between the calculated and the reported values should be within 10%. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J." The following calculations were performed for verification.

**Sample: LFSC01/FLFA-FL-1-0-1' (G9G300243-001), Barium**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(556.55 µg/L)*(0.100 L)*(1)} / {(1.03 g)*(0.8296)} = 65.1 µg/g = 65.1 mg/kg

Reported concentration = 65.1 mg/kg
%D = 0.0%
Values were within 10% difference.

**Sample: LFSC01/FLFA-FL-1-0-1' (G9G300243-001), Mercury**

Conc. (mg/kg) = {(conc. µg/L)*(Final Volume L)*(DF)} / {(Weight Sample g)*(Fraction Solids)}

Conc. (mg/kg) = {(0.345 µg/L)*(0.050 L)*(1)} / {(0.60 g)*(0.8296)} = 0.035 µg/g = 0.035 mg/kg

Reported concentration = 0.035 mg/kg
%D = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% difference for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Inorganic Data Review* (April, 1993).

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC01/FLFA-FL-1-0-1'

TOTAL Metals

Lot-Sample #...: G9G300243-001 Matrix.....: SO
Date Sampled...: 07/27/09 Date Received..: 07/30/09
% Moisture.....: 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9211345 | | | | | | |
| Silver | ND | 0.60<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL..... .....: 0.12 | 07/31/09 | LHAAP1AC |
| Aluminum | 19400 | 25.3<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 6.8 | 07/31/09 | LHAAP1AD |
| Arsenic | 5.3 | 2.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL..... .....: 1.6 | 07/31/09 | LHAAP1AE |
| Barium | 65.1 | 2.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL..... ..: 0.48 | 07/31/09 | LHAAP1AF |
| Beryllium | 1.6 | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL. .....: 0.12 | 07/31/09 | LHAAP1AG |
| Calcium | 1230 | 121<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.1 | 07/31/09 | LHAAP1AH |
| Cadmium | ND | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 07/31/09 | LHAAP1AJ |
| Cobalt | 15.3 | 0.72<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.30 | 07/31/09 | LHAAP1AK |
| Chromium | 28.7 | 1.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.40 | 07/31/09 | LHAAP1AL |
| Copper | 18.4 | 3.0<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.60 | 07/31/09 | LHAAP1AM |
| Iron | 24900 | 12.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.7 | 07/31/09 | LHAAP1AN |
| Potassium | 1480 | 121<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL..... .....: 30.1 | 07/31/09 | LHAAP1AP |
| Magnesium | 8600 | 60.3<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL..... .....: 9.0 | 07/31/09 | LHAAP1AQ |
| Manganese | 679 | 1.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.40 | 07/31/09 | LHAAP1AR |

(Continued on next page)

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC01/FLFA-FL-1-0-1'

TOTAL Metals

Lot-Sample #...: G9G300243-001 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | ND | 603 | mg/kg | SW846 6010B | 07/31/09 | LHAAP1AT |
| | | Dilution Factor: 1 | | MDL.....: 30.1 | | |
| Nickel | 20.5 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHAAP1AU |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 25.4 | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHAAP1AV |
| | | Dilution Factor: 1 | | MDL... .....: 0.40 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 07/31/09 | LHAAP1AW |
| | | Dilution Factor: 1 | | MDL.....: 1.1 | | |
| Selenium | ND | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHAAP1AX |
| | | Dilution Factor: 1 | | MDL.....: 1.7 | | |
| Thallium | ND | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHAAP1A0 |
| | | Dilution Factor: 1 | | MDL.....: 1.0 | | |
| Vanadium | 48.4 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHAAP1A1 |
| | | Dilution Factor: 1 | | MDL.. .....: 0.36 | | |
| Zinc | 48.5 | 3.6 | mg/kg | SW846 6010B | 07/31/09 | LHAAP1A2 |
| | | Dilution Factor: 1 | | MDL..... .....: 0.72 | | |
| Prep Batch #...: 9211453 | | | | | | |
| Mercury | 0.035 B J | 0.048 | mg/kg | SW846 7471A | 07/30-07/31/09 | LHAAP1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC02/FLFA-FL-9-0-1'

TOTAL Metals

Lot-Sample #...: G9G300243-002 Matrix.....: SO
Date Sampled...: 07/27/09 Date Received..: 07/30/09
% Moisture.....: 22

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9211345 | | | | | | |
| Silver | 1.3 | 0.64 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AJ |
| | | Dilution Factor: 1 | | MDL .....: 0.13 | | |
| Aluminum | 20700 | 26.9 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AK |
| | | Dilution Factor: 1 | | MDL.....: 7.2 | | |
| Arsenic | 7.0 | 2.7 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AL |
| | | Dilution Factor: 1 | | MDL.....: 1.7 | | |
| Barium | 81.1 | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.51 | | |
| Beryllium | 0.83 | 0.38 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AN |
| | | Dilution Factor. 1 | | MDL.... .....: 0.13 | | |
| Calcium | 2120 | 128 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AP |
| | | Dilution Factor: 1 | | MDL.... .....: 32.0 | | |
| Cadmium | 0.21 B J | 0.38 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AQ |
| | | Dilution Factor: 1 | | MDL..... .....: 0.13 | | |
| Cobalt | 8.4 | 0.77 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AR |
| | | Dilution Factor: 1 | | MDL..... .....: 0.32 | | |
| Chromium | 31.8 | 1.5 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AT |
| | | Dilution Factor: 1 | | MDL.....: 0.42 | | |
| Copper | 33.3 | 3.2 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AU |
| | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Iron | 28000 | 12.8 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AV |
| | | Dilution Factor: 1 | | MDL.. .....: 4.0 | | |
| Potassium | 1150 | 128 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AW |
| | | Dilution Factor: 1 | | MDL.....: 32.0 | | |
| Magnesium | 3330 | 64.1 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AX |
| | | Dilution Factor: 1 | | MDL.....: 9.6 | | |
| Manganese | 312 | 1.5 | mg/kg | SW846 6010B | 07/31/09 | LHADH1A0 |
| | | Dilution Factor: 1 | | MDL.... .....: 0.42 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC02/FLFA-FL-9-0-1'

TOTAL Metals

Lot-Sample #...: G9G300243-002 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 34.9 B J | 641 | mg/kg | SW846 6010B | 07/31/09 | LHADH1A1 |
| | | Dilution Factor: 1 | | MDL.....: 32.0 | | |
| Nickel | 13.0 | 1.3 | mg/kg | SW846 6010B | 07/31/09 | LHADH1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.38 | | |
| Lead | 62.5 | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADH1A3 |
| | | Dilution Factor: 1 | | MDL.....: 0.42 | | |
| Antimony | ND VL | 1.9 | mg/kg | SW846 6010B | 07/31/09 | LHADH1A4 |
| | | Dilution Factor: 1 | | MDL..... .....: 1.2 | | |
| Selenium | ND | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADH1A5 |
| | | Dilution Factor: 1 | | MDL.....: 1.8 | | |
| Thallium | ND | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AA |
| | | Dilution Factor: 1 | | MDL.....: 1.1 | | |
| Vanadium | 54.2 | 1.3 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.38 | | |
| Zinc | 110 | 3.8 | mg/kg | SW846 6010B | 07/31/09 | LHADH1AD |
| | | Dilution Factor: 1 | | MDL.... .....: 0.77 | | |
| Prep Batch #...: 9211453 | | | | | | |
| Mercury | 0.13 | 0.051 | mg/kg | SW846 7471A | 07/30-07/31/09 | LHADH1AE |
| | | Dilution Factor: 1 | | MDL.....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC03/FLFA-FL-17-0-1'

TOTAL Metals

Lot-Sample #...: G9G300243-003 Matrix.....: SO
Date Sampled...: 07/28/09 Date Received..: 07/30/09
% Moisture.....: 22

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9211345 | | | | | | |
| Silver | 0.52 B J | 0.64 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Aluminum | 26500 | 27.1 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AJ |
| | | Dilution Factor: 1 | | MDL.....: 7.2 | | |
| Arsenic | 5.5 | 2.7 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AK |
| | | Dilution Factor: 1 | | MDL..... .....: 1.7 | | |
| Barium | 118 | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AL |
| | | Dilution Factor: 1 | | MDL.....: 0.52 | | |
| Beryllium | 2.3 | 0.39 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Calcium | 1830 | 129 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AN |
| | | Dilution Factor: 1 | | MDL.....: 32.2 | | |
| Cadmium | ND | 0.39 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AP |
| | | Dilution Factor: 1 | | MDL.... .....: 0.13 | | |
| Cobalt | 14.9 | 0.77 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.32 | | |
| Chromium | 39.1 | 1.5 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AR |
| | | Dilution Factor: 1 | | MDL.....: 0.43 | | |
| Copper | 38.7 | 3.2 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AT |
| | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Iron | 34900 | 12.9 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AU |
| | | Dilution Factor: 1 | | MDL.....: 4.0 | | |
| Potassium | 2310 | 129 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AV |
| | | Dilution Factor: 1 | | MDL.....: 32.2 | | |
| Magnesium | 11200 | 64.5 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AW |
| | | Dilution Factor: 1 | | MDL.....: 9.7 | | |
| Manganese | 457 | 1.5 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.43 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC03/FLFA-FL-17-0-1'

TOTAL Metals

Lot-Sample #...: G9G300243-003 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 49.6 B J | 645 | mg/kg | SW846 6010B | 07/31/09 | LHADL1A0 |
| | | Dilution Factor: 1 | | MDL.....: 32.2 | | |
| Nickel | 32.9 | 1.3 | mg/kg | SW846 6010B | 07/31/09 | LHADL1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.39 | | |
| Lead | 27.7 | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADL1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.43 | | |
| Antimony | ND VL | 1.9 | mg/kg | SW846 6010B | 07/31/09 | LHADL1A3 |
| | | Dilution Factor: 1 | | MDL.....: 1.2 | | |
| Selenium | ND | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADL1A4 |
| | | Dilution Factor: 1 | | MDL.....: 1.8 | | |
| Thallium | ND | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AA |
| | | Dilution Factor: 1 | | MDL. .....: 1.1 | | |
| Vanadium | 60.3 | 1.3 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.39 | | |
| Zinc | 91.2 | 3.9 | mg/kg | SW846 6010B | 07/31/09 | LHADL1AD |
| | | Dilution Factor: 1 | | MDL . .. .....: 0.77 | | |
| Prep Batch #...: 9211453 | | | | | | |
| Mercury | 0.069 | 0.052 | mg/kg | SW846 7471A | 07/30-07/31/09 | LHADL1AE |
| | | Dilution Factor: 1 | | MDL.....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC04/FLFA-FL-18-1-2'

TOTAL Metals

Lot-Sample #...: G9G300243-004 Matrix.....: SO
Date Sampled...: 07/28/09 Date Received..: 07/30/09
% Moisture.....: 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9211345 | | | | | | |
| Silver | ND | 0.61<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 07/31/09 | LHADN1AQ |
| Aluminum | 27800 | 25.8<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 6.9 | 07/31/09 | LHADN1AR |
| Arsenic | 5.9 | 2.6<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 1.6 | 07/31/09 | LHADN1AT |
| Barium | 102 | 2.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 07/31/09 | LHADN1AU |
| Beryllium | 0.92 | 0.37<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 07/31/09 | LHADN1AV |
| Calcium | 16800 | 123<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.7 | 07/31/09 | LHADN1AW |
| Cadmium | ND | 0.37<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL..... .....: 0.12 | 07/31/09 | LHADN1AX |
| Cobalt | 17.2 | 0.74<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.31 | 07/31/09 | LHADN1A0 |
| Chromium | 30.5 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.40 | 07/31/09 | LHADN1A1 |
| Copper | 20.9 | 3.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.61 | 07/31/09 | LHADN1A2 |
| Iron | 34600 | 12.3<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL..... .....: 3.8 | 07/31/09 | LHADN1A3 |
| Potassium | 2260 | 123<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.7 | 07/31/09 | LHADN1A4 |
| Magnesium | 11300 | 61.3<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 9.2 | 07/31/09 | LHADN1A5 |
| Manganese | 869 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.40 | 07/31/09 | LHADN1AA |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC04/FLFA-FL-18-1-2'

TOTAL Metals

Lot-Sample #...: G9G300243-004 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 70.7 B J | 613 | mg/kg | SW846 6010B | 07/31/09 | LHADN1AC |
| | | Dilution Factor: 1 | | MDL.....: 30.7 | | |
| Nickel | 15.7 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHADN1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Lead | 20.0 | 2.5 | mg/kg | SW846 6010B | 07/31/09 | LHADN1AE |
| | | Dilution Factor: 1 | | MDL..... ...: 0.40 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 07/31/09 | LHADN1AF |
| | | Dilution Factor: 1 | | MDL..... ..: 1.2 | | |
| Selenium | ND | 2.5 | mg/kg | SW846 6010B | 07/31/09 | LHADN1AG |
| | | Dilution Factor: 1 | | MDL.....: 1.7 | | |
| Thallium | ND | 2.5 | mg/kg | SW846 6010B | 07/31/09 | LHADN1AH |
| | | Dilution Factor: 1 | | MDL.....: 1.0 | | |
| Vanadium | 60.9 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHADN1AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.37 | | |
| Zinc | 46.8 | 3.7 | mg/kg | SW846 6010B | 07/31/09 | LHADN1AK |
| | | Dilution Factor: 1 | | MDL.....: 0.74 | | |
| Prep Batch #...: 9211453 | | | | | | |
| Mercury | 0.055 | 0.049 | mg/kg | SW846 7471A | 07/30-07/31/09 | LHADN1AL |
| | | Dilution Factor: 1 | | MDL.....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC05/FLFA-SW-2-01'

TOTAL Metals

Lot-Sample #...: G9G300243-005 Matrix.....: SO
Date Sampled...: 07/27/09 Date Received..: 07/30/09
% Moisture.....: 22

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9211345 | | | | | | |
| Silver | ND | 0.64 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Aluminum | 20800 | 26.9 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AJ |
| | | Dilution Factor: 1 | | MDL.....: 7.2 | | |
| Arsenic | 5.6 | 2.7 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AK |
| | | Dilution Factor: 1 | | MDL.....: 1.7 | | |
| Barium | 66.5 | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AL |
| | | Dilution Factor: 1 | | MDL.....: 0.51 | | |
| Beryllium | 1.3 | 0.38 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Calcium | 12100 | 128 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AN |
| | | Dilution Factor: 1 | | MDL.....: 32.0 | | |
| Cadmium | ND | 0.38 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AP |
| | | Dilution Factor: 1 | | MDL.....: 0.13 | | |
| Cobalt | 10.0 | 0.77 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.32 | | |
| Chromium | 33.3 | 1.5 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AR |
| | | Dilution Factor: 1 | | MDL.....: 0.42 | | |
| Copper | 34.2 | 3.2 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AT |
| | | Dilution Factor: 1 | | MDL.....: 0.64 | | |
| Iron | 22800 | 12.8 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AU |
| | | Dilution Factor: 1 | | MDL.....: 4.0 | | |
| Potassium | 2200 | 128 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AV |
| | | Dilution Factor: 1 | | MDL.....: 32.0 | | |
| Magnesium | 22300 | 64.0 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AW |
| | | Dilution Factor: 1 | | MDL.....: 9.6 | | |
| Manganese | 520 | 1.5 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.42 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC05/FLFA-SW-2-01'

TOTAL Metals

Lot-Sample #...: G9G300243-005 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 40.4 B J | 640 | mg/kg | SW846 6010B | 07/31/09 | LHADP1A0 |
| | | Dilution Factor: 1 | | MDL.....: 32.0 | | |
| Nickel | 20.5 | 1.3 | mg/kg | SW846 6010B | 07/31/09 | LHADP1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.38 | | |
| Lead | 23.8 | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADP1A2 |
| | | Dilution Factor: 1 | | MDL... .....: 0.42 | | |
| Antimony | ND VL | 1.9 | mg/kg | SW846 6010B | 07/31/09 | LHADP1A3 |
| | | Dilution Factor: 1 | | MDL.....: 1.2 | | |
| Selenium | ND | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADP1A4 |
| | | Dilution Factor: 1 | | MDL.....: 1.8 | | |
| Thallium | ND | 2.6 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AA |
| | | Dilution Factor: 1 | | MDL..... ..: 1.1 | | |
| Vanadium | 46.5 | 1.3 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AC |
| | | Dilution Factor: 1 | | MDL.....: 0.38 | | |
| Zinc | 73.1 | 3.8 | mg/kg | SW846 6010B | 07/31/09 | LHADP1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.77 | | |
| Prep Batch #...: 9211453 | | | | | | |
| Mercury | 0.035 B J | 0.051 | mg/kg | SW846 7471A | 07/30-07/31/09 | LHADP1AE |
| | | Dilution Factor: 1 | | MDL.... .....: 0.011 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC06/FLFA-SW-10-01'

TOTAL Metals

Lot-Sample #...: G9G300243-006 Matrix.....: SO
Date Sampled...: 07/27/09 Date Received..: 07/30/09
% Moisture.....: 18

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9211345 | | | | | | |
| Silver | ND | 0.61<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.... .....: 0.12 | 07/31/09 | LHADT1AQ |
| Aluminum | 32300 | 25.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 6.8 | 07/31/09 | LHADT1AR |
| Arsenic | 5.8 | 2.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 1.6 | 07/31/09 | LHADT1AT |
| Barium | 59.1 | 2.4<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.49 | 07/31/09 | LHADT1AU |
| Beryllium | 0.84 | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 07/31/09 | LHADT1AV |
| Calcium | 2380 | 121<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL..... ..: 30.3 | 07/31/09 | LHADT1AW |
| Cadmium | ND | 0.36<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.12 | 07/31/09 | LHADT1AX |
| Cobalt | 10.4 | 0.73<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.30 | 07/31/09 | LHADT1A0 |
| Chromium | 38.1 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.40 | 07/31/09 | LHADT1A1 |
| Copper | 21.4 | 3.0<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.61 | 07/31/09 | LHADT1A2 |
| Iron | 36700 | 12.1<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 3.8 | 07/31/09 | LHADT1A3 |
| Potassium | 1880 | 121<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 30.3 | 07/31/09 | LHADT1A4 |
| Magnesium | 4420 | 60.7<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 9.1 | 07/31/09 | LHADT1A5 |
| Manganese | 348 | 1.5<br>Dilution Factor: 1 | mg/kg | SW846 6010B<br>MDL.....: 0.40 | 07/31/09 | LHADT1AA |

(Continued on next page)

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC06/FLFA-SW-10-01'

TOTAL Metals

Lot-Sample #...: G9G300243-006 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 38.8 B J | 607 | mg/kg | SW846 6010B | 07/31/09 | LHADT1AC |
| | | Dilution Factor: 1 | | MDL.....: 30.3 | | |
| Nickel | 14.9 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHADT1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 21.3 | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADT1AE |
| | | Dilution Factor: 1 | | MDL.....: 0.40 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 07/31/09 | LHADT1AF |
| | | Dilution Factor: 1 | | MDL.....: 1.1 | | |
| Selenium | ND | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADT1AG |
| | | Dilution Factor: 1 | | MDL.....: 1.7 | | |
| Thallium | ND | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADT1AH |
| | | Dilution Factor: 1 | | MDL.....: 1.0 | | |
| Vanadium | 62.4 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHADT1AJ |
| | | Dilution Factor: 1 | | MDL..... .. ..: 0.36 | | |
| Zinc | 42.2 | 3.6 | mg/kg | SW846 6010B | 07/31/09 | LHADT1AK |
| | | Dilution Factor: 1 | | MDL.....: 0.73 | | |
| Prep Batch #...: 9211453 | | | | | | |
| Mercury | 0.070 | 0.049 | mg/kg | SW846 7471A | 07/30-07/31/09 | LHADT1AL |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC07/FLFA-FL-7-2-3'

TOTAL Metals

Lot-Sample #...: G9G300243-007 Matrix.....: SO
Date Sampled...: 07/28/09 Date Received..: 07/30/09
% Moisture.....: 16

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9211345 | | | | | | |
| Silver | ND | 0.60 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AH |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Aluminum | 16900 | 25.1 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AJ |
| | | Dilution Factor: 1 | | MDL.....: 6.7 | | |
| Arsenic | 6.7 J | 2.5 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AK |
| | | Dilution Factor: 1 | | MDL.... .....: 1.6 | | |
| Barium | 52.6 | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AL |
| | | Dilution Factor: 1 | | MDL.....: 0.48 | | |
| Beryllium | 0.93 | 0.36 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AM |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 1110 | 120 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AN |
| | | Dilution Factor: 1 | | MDL.....: 29.9 | | |
| Cadmium | ND | 0.36 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AP |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Cobalt | 15.4 J | 0.72 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AQ |
| | | Dilution Factor: 1 | | MDL.....: 0.30 | | |
| Chromium | 41.5 | 1.4 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AR |
| | | Dilution Factor: 1 | | MDL.....: 0.40 | | |
| Copper | 12.8 | 3.0 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AT |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Iron | 33600 J | 12.0 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AU |
| | | Dilution Factor: 1 | | MDL.....: 3.7 | | |
| Potassium | 1030 J | 120 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AV |
| | | Dilution Factor: 1 | | MDL..... .....: 29.9 | | |
| Magnesium | 6990 J | 59.9 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AW |
| | | Dilution Factor: 1 | | MDL.....: 9.0 | | |
| Manganese | 798 J | 1.4 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AX |
| | | Dilution Factor: 1 | | MDL.....: 0.40 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC07/FLFA-FL-7-2-3'

TOTAL Metals

Lot-Sample #...: G9G300243-007 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 32.1 B J | 599 | mg/kg | SW846 6010B | 07/31/09 | LHADW1A0 |
| | | Dilution Factor: 1 | | MDL.....: 29.9 | | |
| Nickel | 14.8 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHADW1A1 |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 16.7 | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADW1A2 |
| | | Dilution Factor: 1 | | MDL..... ...: 0.40 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 07/31/09 | LHADW1A3 |
| | | Dilution Factor: 1 | | MDL.... .....: 1.1 | | |
| Selenium | ND | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADW1A4 |
| | | Dilution Factor: 1 | | MDL.....: 1.7 | | |
| Thallium | ND | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AA |
| | | Dilution Factor: 1 | | MDL... .....: 1.0 | | |
| Vanadium | 57.3 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AC |
| | | Dilution Factor: 1 | | MDL. .....: 0.36 | | |
| Zinc | 32.3 | 3.6 | mg/kg | SW846 6010B | 07/31/09 | LHADW1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.72 | | |
| Prep Batch #...: 9211453 | | | | | | |
| Mercury | 0.014 B J | 0.048 | mg/kg | SW846 7471A | 07/30-07/31/09 | LHADW1AE |
| | | Dilution Factor: 1 | | MDL.... .....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: TMSC01

TOTAL Metals

Lot-Sample #...: G9G300243-008 Matrix.....: SO
Date Sampled...: 07/28/09 Date Received..: 07/30/09
% Moisture.....: 17

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Prep Batch #...: 9211345 | | | | | | |
| Silver | ND | 0.60 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AQ |
| | | Dilution Factor: 1 | | MDL..... .....: 0.12 | | |
| Aluminum | 17300 | 25.3 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AR |
| | | Dilution Factor: 1 | | MDL.....: 6.8 | | |
| Arsenic | 4.4 J | 2.5 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AT |
| | | Dilution Factor: 1 | | MDL.....: 1.6 | | |
| Barium | 48.6 | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AU |
| | | Dilution Factor: 1 | | MDL .....: 0.48 | | |
| Beryllium | 0.86 | 0.36 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AV |
| | | Dilution Factor: 1 | | MDL.....: 0.12 | | |
| Calcium | 1090 | 121 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AW |
| | | Dilution Factor: 1 | | MDL.....: 30.1 | | |
| Cadmium | ND | 0.36 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AX |
| | | Dilution Factor: 1 | | MDL..... .....: 0.12 | | |
| Cobalt | 10.7 J | 0.72 | mg/kg | SW846 6010B | 07/31/09 | LHADX1A0 |
| | | Dilution Factor: 1 | | MDL.....: 0.30 | | |
| Chromium | 40.7 | 1.4 | mg/kg | SW846 6010B | 07/31/09 | LHADX1A1 |
| | | Dilution Factor: 1 | | MDL..... .....: 0.40 | | |
| Copper | 14.0 | 3.0 | mg/kg | SW846 6010B | 07/31/09 | LHADX1A2 |
| | | Dilution Factor: 1 | | MDL.....: 0.60 | | |
| Iron | 22800 J | 12.1 | mg/kg | SW846 6010B | 07/31/09 | LHADX1A3 |
| | | Dilution Factor: 1 | | MDL.....: 3.7 | | |
| Potassium | 2180 J | 121 | mg/kg | SW846 6010B | 07/31/09 | LHADX1A4 |
| | | Dilution Factor: 1 | | MDL.....: 30.1 | | |
| Magnesium | 10100 J | 60.3 | mg/kg | SW846 6010B | 07/31/09 | LHADX1A5 |
| | | Dilution Factor: 1 | | MDL..... .....: 9.0 | | |
| Manganese | 511 J | 1.4 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AA |
| | | Dilution Factor: 1 | | MDL.....: 0.40 | | |

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# Form I Copy

Shaw E & I Inc

Client Sample ID: TMSC01

TOTAL Metals

Lot-Sample #...: G9G300243-008 Matrix.....: SO

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD | PREPARATION-ANALYSIS DATE | WORK ORDER # |
|---|---|---|---|---|---|---|
| Sodium | 33.9 B J | 603 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AC |
| | | Dilution Factor: 1 | | MDL.... .. ....: 30.1 | | |
| Nickel | 15.1 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AD |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Lead | 12.3 | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AE |
| | | Dilution Factor: 1 | | MDL.....: 0.40 | | |
| Antimony | ND VL | 1.8 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AF |
| | | Dilution Factor: 1 | | MDL.....: 1.1 | | |
| Selenium | ND | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AG |
| | | Dilution Factor: 1 | | MDL..... .....: 1.7 | | |
| Thallium | ND | 2.4 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AH |
| | | Dilution Factor: 1 | | MDL.....: 1.0 | | |
| Vanadium | 44.3 | 1.2 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AJ |
| | | Dilution Factor: 1 | | MDL.....: 0.36 | | |
| Zinc | 32.2 | 3.6 | mg/kg | SW846 6010B | 07/31/09 | LHADX1AK |
| | | Dilution Factor: 1 | | MDL... .....: 0.72 | | |
| Prep Batch #...: 9211453 | | | | | | |
| Mercury | 0.014 B J | 0.048 | mg/kg | SW846 7471A | 07/30-07/31/09 | LHADX1AL |
| | | Dilution Factor: 1 | | MDL.....: 0.010 | | |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

B Estimated result Result is less than RL

**Shaw Environmental, Inc.**
2113 Emmorton Park Road
Edgewood, Maryland
410-612-6350
FAX: 410-612-6351

Shaw® Shaw Environmental, Inc.

**MEMORANDUM**

**TO:** Jeff Parks, Shaw E&I Radford Army Ammunition Plant (RFAAP) Project Manager

**FROM:** Eric Malarek, Shaw E&I Project Chemist

**SUBJECT:** RFAAP Data Validation – PCBs
Test America Laboratories, Inc., SDG G9G300243

**DATE:** August 20, 2009

The purpose of this memorandum is to present the data validation report for the samples collected at Main Manufacturing Area at RFAAP for FLFA Removal Action on July 27, 2009 and July 28, 2009. Solid samples were analyzed for PCBs using USEPA Method 3550B/3665A/8082. A total of eight solid samples were validated. The sample Ids are:

| Field Sample ID | Lab Sample ID | Field Sample ID | Lab Sample ID |
|---|---|---|---|
| LFSC01/FLFA-FL-1-0-1' | G9G300243-001 | LFSC05/FLFA-SW-2-01' | G9G300243-005 |
| LFSC02/FLFA-FL-9-0-1' | G9G300243-002 | LFSC06/FLFA-SW-10-01' | G9G300243-006 |
| LFSC03/FLFA-FL-17-0-1' | G9G300243-003 | LFSC07/FLFA-FL-7-2-3' | G9G300243-007 |
| LFSC04/FLFA-FL-18-1-2' | G9G300243-004 | TMSC01 | G9G300243-008 |

Data were reviewed by Eric Malarek and validated using a combination of project QAPP, *Quality Systems Manual for Environmental Laboratories, Final Version 3, January, 2006* (DoD, 2006) (DoD QSM), method-specific criteria, and laboratory SOP criteria. The data qualifier scheme was consistent with the *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994). Parameters evaluated are presented in **Table 1**. Data associated with parameters in compliance with quality control specifications have not been qualified. Data associated with parameters that did not comply with quality control specifications and directly impacted project data have been qualified in accordance with USEPA Region III specifications.

**Table 1 Laboratory Performance Criteria**

| Qualified | | Parameter |
|---|---|---|
| Yes | No | |
| | X | Holding Times and Preservation |
| | X | Initial Calibration |
| | X | Continuing Calibration |
| | X | Blank Analysis |
| | X | System Monitoring Compounds |
| | X | Laboratory Control Samples |
| X | | Matrix Spike/Spike Duplicate |
| | X | Field Duplicate |
| X | | Quantitation Verification |

The quality of data collected in support of this sampling activity is considered acceptable with noted qualifications.

Eric Malarek, Chemist

8/20/09
Date

**RFAAP VALIDATION REPORT**
**PCB REVIEW**
**SDG G9G300243**

**I-Holding Times and Preservation**
The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of sample extraction and analysis. Holding time criteria: For solid samples, PCB compounds are shipped cooled (@4°C ± 2°C) with a maximum holding time of 14 days from sample collection to preparative extraction and 40 days from preparative extraction to determinative analysis.

- Temperature Review: The temperature blank was sent with each cooler and recorded by the laboratory upon receipt. For samples collected on 07/27/09 and 07/28/09, the cooler was received by the primary laboratory (Test America) on 07/30/09 at 4.0°C. All criteria were met. No qualifiers were applied.

- Holding Time Review: The solid samples were collected on 07/27/09 and 07/28/09. The PCBs were extracted on 07/30/09 and analyzed on 07/31/09. Sample collection dates may be found on the attached form 1s. All criteria were met. No qualifiers were applied.

**II-Initial Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the target compounds. The initial 5 point calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run. Calibration factors are generated for each compound. The DoD QSM specifies that the percent relative standard deviation (%RSD) for all single peak target analytes, and aroclors 1016 and 1260 must be <20% or the mean %RSD for all analytes in the standard must be ≤20%. If linear regression is used, the correlation coefficient must be ≥0.995. All detects are qualified as estimated "J" for where there were exceeding %RSDs, and all non-detects are qualified as estimated "UJ" for where there were grossly exceeding recoveries, unless determined to be unusable "R". Grossly exceeding is defined as twice the established criteria limits.

- For the PCB initial calibration performed on 06/06/09 on instrument GC66A.i, all criteria were met. No qualifiers were applied. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) were analyzed using this initial calibration.

- For the PCB initial calibration performed on 08/03/09 on instrument GC66B.i, all criteria were met. No qualifiers were applied. The confirmations for samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC05/FLFA-SW-2-01' (G9G300243-005), and LFSC06/FLFA-SW-10-01' (G9G300243-006) were analyzed using this initial calibration.

**III-Continuing Calibration**
Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for pesticide/PCB target compounds. Continuing calibration standards containing both target compounds and surrogates are analyzed at the beginning of each 12-hour analytical shift and after every 20 samples. The DoD QSM specifies that the percent difference (%D) or the average %Ds for all analytes in the standard from the initial calibration should be no greater than ±20%.

- For PCB 1016/1260 initial calibration verification performed on 06/06/09 @18:32 on instrument GC66A.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this initial calibration verification.

- For PCB 1016/1260 continuing calibration performed on 07/31/09 @17:31 on instrument GC66A.i, all criteria were met. No qualifiers were applied. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) were analyzed using this continuing calibration.

- For PCB 1016/1260 continuing calibration performed on 07/31/09 @17:31 on instrument GC66A.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

- For PCB 1016/1260 initial calibration verification performed on 08/03/09 @20:27 on instrument GC66B.i, all criteria were met. No qualifiers were applied. The confirmations for samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC05/FLFA-SW-2-01' (G9G300243-005), and LFSC06/FLFA-SW-10-01' (G9G300243-006) were analyzed No samples reported were analyzed using this initial calibration verification.

- For PCB 1016/1260 continuing calibration performed on 08/04/09 @00:04 on instrument GC66B.i, all criteria were met. No qualifiers were applied. No samples reported were analyzed using this continuing calibration.

**IV-Blank Analysis**

The purpose of laboratory or field blank analyses is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. One method blank per analytical batch must be run on each instrument used to analyze samples. The DoD QSM criterion specifies all concentrations should be less than one-half MRL. Positive sample results are reported and qualified "B", if the concentration of the compound in the sample is ≤5 times (5X) the maximum amount for pesticide and PCB target compounds. **Table 2** summarizes the blank contamination analysis. Action levels are based upon dilution factor of one and for solid matrices were converted to soil values (soil conversion factor = 33) if needed. The rinse blank 072909R (G9G300253-001) applies to the soil samples in this SDG.

**Table 2 Blank Contamination Analysis Summary**

| Parameter | Analysis Date | QC Blank ID | Compound | Max Conc. µg/kg | Action Level µg/kg | B qualified samples |
|---|---|---|---|---|---|---|
| PCBs | 07/31/09 | G9G300000-400 | All target <½MRL | NA | NA | None |
| PCBs | 08/04/09 | 072909R | All target <½MRL | NA | NA | None |

NA = Not Applicable
MRL = Method Reporting Limit

**V-System Monitoring Compound (Surrogates)**

Laboratory performance on individual samples is evaluated through the review of surrogate spike samples. Surrogate spikes are added to all samples and blanks to measure their recovery in sample and blank matrices. The percent recoveries (%Rs) must be within the specified control limits. DoD surrogate recovery limits are specified in Table D-3 of the DoD QSM (DoD, 2006). If the surrogate is not listed, then the laboratory criteria shall be used.

Solid Criteria: Decachlorobiphenyl: PCBs: 60-125% (DoD QSM 60-125%)

- All criteria were met. No qualifiers were applied.

**VI-Laboratory Control Samples**
Laboratory control samples (LCS) are used to monitor laboratory accuracy by calculating the percent recoveries of the spiked compounds. All LCS percent recoveries must be within the specified control limits. DoD QSM solid LCS recovery limits are specified in Table D-17 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample G9G300000-400 was used as the solid LCS for the PCB analysis on 07/31/09. All criteria were met. No qualifiers were applied. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) apply to this LCS.

**VII-Matrix Spike/Matrix Spike Duplicate**
Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The percent recoveries (%Rs) and the relative percent difference (RPD) must be within the specified control limits. DoD solid MS/MSD recovery limits follow the LCS criteria and are specified in Table D-17 of the DoD QSM (DoD, 2006). If the compound is not listed, then the laboratory criteria shall be used.

- Sample LFSC01/FLFA-FL-1-0-1' (G9G300243-001) was used as the MS/MSD for the PCB analysis on 07/31/09. PCB-1260 (41%; RPD=33%) was outside criteria. For PCB-1016, all criteria were met. The associated LCS (Section VI) was within criteria for all target PCBs. The spiked sample was qualified estimated "J" based upon the high RPD and low recovery. Samples LFSC01/FLFA-FL-1-0-1' (G9G300243-001), LFSC02/FLFA-FL-9-0-1' (G9G300243-002), LFSC03/FLFA-FL-17-0-1' (G9G300243-003), LFSC04/FLFA-FL-18-1-2' (G9G300243-004), LFSC05/FLFA-SW-2-01' (G9G300243-005), LFSC06/FLFA-SW-10-01' (G9G300243-006), LFSC07/FLFA-FL-7-2-3' (G9G300243-007), and TMSC01 (G9G300243-008) apply to this MS/MSD.

**VIII-Field Duplicate Sample Analysis**
Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The RPD was calculated only for those analytes which were detected at levels exceeding the method reporting limits in both samples of the duplicate pair. Analytes that were rejected (R-qualified) in either sample of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the solid samples. Analytical results were qualified as estimated (J) for any RPDs exceeding criteria.

- Field soil sample duplicate pair LFSC07/FLFA-FL-7-2-3' (G9G300243-007) and TMSC01 (G9G300243-008) was collected for chlorinated PCBs. All chlorinated PCB target compounds were non-detect for the duplicate pair. All criteria were met. No qualifiers were applied.

**IX-Quantitation Verification**
The accuracy of analytical results was verified through the calculation of several parameters. The difference between the calculated value and the reported value must be within 10% difference. All positive values must have less than or equal to 40% %D between the primary and secondary columns. Any sample value >MDL and <MRL or <3*MDL (whichever is greater) was qualified as estimated, "J."

- All positive chlorinated PCBs met confirmation criteria. No qualifiers were applied.

**Sample: LFSC01/FLFA-FL-1-0-1' (G9G300243-001), Aroclor 1260**

Conc. µg/kg = (Ax * Vt * DF) / (CF * Vi * Ws * D)

where: Conc. = Sample concentration in µg/kg
Ax = Area/response for compound being measured.
Vt = Volume of total extract, taking into account dilutions (i.e., a 1-to-10 dilution of a 1-mL extract will mean V(t) = 10000 µL.
CF = Ave calibration response factor for compound being measured from ICAL (Area/pg)
Vi = Volume of extract injected (µL).
W(s) = Weight of sample extracted or diluted in grams.
D = Percent dry weight (100 - % moisture in sample)/100 = 1.0 for Wet Weight
DF = Dilution factor

Conc (Totals) µg/kg = (4970453679Area*10000µL*1) / (22920562Area/pg*(1000)*1µL*29.93g*0.83)
= 87 µg/kg (Signal #1)

Reported Value = 87 µg/kg (signal #1)
% Difference = 0.0%
Values were within 10% difference.

## Laboratory and Data Validation Qualifiers

| Qualifier | Definition |
|---|---|
| **Laboratory Qualifiers[1]** | |
| No Code | Confirmed identification. |
| U | Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. |
| J | Estimated: The analyte was positively identified; the quantitation is estimation. |
| B | Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank. |
| E | Identifies compounds whose concentrations exceed the upper level of the calibration range (organics) or Reported value is estimated because of the presence of interferences. |
| D | Indicates sample was analyzed at a dilution. |
| EMPC | The ion-abundance ratio between the two characteristic PCDD/PCDF ions was outside accepted ranges. The detected PCDD/PCDF was reported as an estimated maximum possible concentration (EMPC). |
| P | Target analyte confirmation >40% D for detected compound between the primary and secondary columns. |
| N | Non-target analyte: The analyte is a tentatively identified compound (using mass spectroscopy). |
| Q | One or more quality control criteria failed. |
| **USEPA Region III Data Validation Qualifiers[2]** | |
| R | Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result. |
| B | Not detected substantially above the level of the reported in laboratory or field blanks. |
| J | Analyte present. Reported value may not be accurate or precise. |
| UJ | Not detected, quantitation limit may be inaccurate or imprecise. |
| N | Tentative Identification. Consider present. Special methods may be to confirm its presence or absence in future sampling efforts. |
| NJ | Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity. |
| K | Analyte present. Reported value may be biased high. Actual value is expected to be lower. |
| L | Analyte present. Reported value may be biased low. Actual value is expected to be higher. |
| UL | Not detected, quantitation limit is probably higher. |

[1]The noted laboratory qualifiers are a minimum. If a laboratory has more and they are consistent with USEPA conventions and properly defined, the laboratory may use them. Data qualifiers may be combined when appropriate.
[2]The USEPA data validation qualifiers are referenced from *Region III Modifications to the National Functional Guidelines for Organic Data Review* (September 1994).

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC01/FLFA-FL-1-0-1'

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9G300243-001 | Work Order #...: | LHAAP1A5 | Matrix.....: | SO |
| Date Sampled...: | 07/27/09 | Date Received..: | 07/30/09 | | |
| Prep Date.....: | 07/30/09 | Analysis Date..: | 07/31/09 | | |
| Prep Batch #...: | 9211400 | | | | |
| Dilution Factor: | 1 | | | | |
| % Moisture.....: | 17 | Method.....: | SW846 8082 | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 40 | ug/kg | 10 |
| Aroclor 1221 | ND | 40 | ug/kg | 13 |
| Aroclor 1232 | ND | 40 | ug/kg | 10 |
| Aroclor 1242 | ND | 40 | ug/kg | 10 |
| Aroclor 1248 | ND | 40 | ug/kg | 10 |
| Aroclor 1254 | ND | 40 | ug/kg | 10 |
| **Aroclor 1260** | **87 J** | **40** | **ug/kg** | **10** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 96 | (60 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC02/FLFA-FL-9-0-1'

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9G300243-002 | Work Order #...: | LHADH1AG | Matrix.....: | SO |
| Date Sampled...: | 07/27/09 | Date Received..: | 07/30/09 | | |
| Prep Date.....: | 07/30/09 | Analysis Date..: | 07/31/09 | | |
| Prep Batch #...: | 9211400 | | | | |
| Dilution Factor: | 1 | | | | |
| % Moisture.....: | 22 | Method.....: | SW846 8082 | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 42 | ug/kg | 11 |
| Aroclor 1221 | ND | 42 | ug/kg | 13 |
| Aroclor 1232 | ND | 42 | ug/kg | 11 |
| Aroclor 1242 | ND | 42 | ug/kg | 11 |
| Aroclor 1248 | ND | 42 | ug/kg | 11 |
| Aroclor 1254 | ND | 42 | ug/kg | 11 |
| Aroclor 1260 | ND | 42 | ug/kg | 11 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 97 | (60 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC03/FLFA-FL-17-0-1'

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9G300243-003 | Work Order #...: | LHADL1AG | Matrix.....: | SO |
| Date Sampled...: | 07/28/09 | Date Received..: | 07/30/09 | | |
| Prep Date.....: | 07/30/09 | Analysis Date..: | 07/31/09 | | |
| Prep Batch #...: | 9211400 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 22 | Method.....: | SW846 8082 | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 42 | ug/kg | 11 |
| Aroclor 1221 | ND | 42 | ug/kg | 13 |
| Aroclor 1232 | ND | 42 | ug/kg | 11 |
| Aroclor 1242 | ND | 42 | ug/kg | 11 |
| Aroclor 1248 | ND | 42 | ug/kg | 11 |
| Aroclor 1254 | ND | 42 | ug/kg | 11 |
| Aroclor 1260 | ND | 42 | ug/kg | 11 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 98 | (60 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC04/FLFA-FL-18-1-2'

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9G300243-004 | **Work Order #...:** | LHADN1AN | **Matrix.....:** | SO |
| **Date Sampled...:** | 07/28/09 | **Date Received..:** | 07/30/09 | | |
| **Prep Date.....:** | 07/30/09 | **Analysis Date..:** | 07/31/09 | | |
| **Prep Batch #...:** | 9211400 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 18 | **Method.....:** | SW846 8082 | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 40 | ug/kg | 10 |
| Aroclor 1221 | ND | 40 | ug/kg | 13 |
| Aroclor 1232 | ND | 40 | ug/kg | 10 |
| Aroclor 1242 | ND | 40 | ug/kg | 10 |
| Aroclor 1248 | ND | 40 | ug/kg | 10 |
| Aroclor 1254 | ND | 40 | ug/kg | 10 |
| Aroclor 1260 | ND | 40 | ug/kg | 10 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 92 | (60 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC05/FLFA-SW-2-01'

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | G9G300243-005 | Work Order #...: | LHADP1AG | Matrix.....: | SO |
| Date Sampled...: | 07/27/09 | Date Received..: | 07/30/09 | | |
| Prep Date.....: | 07/30/09 | Analysis Date..: | 07/31/09 | | |
| Prep Batch #...: | 9211400 | | | | |
| Dilution Factor: | 0.99 | | | | |
| % Moisture.....: | 22 | Method.....: | SW846 8082 | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 42 | ug/kg | 11 |
| Aroclor 1221 | ND | 42 | ug/kg | 13 |
| Aroclor 1232 | ND | 42 | ug/kg | 11 |
| Aroclor 1242 | ND | 42 | ug/kg | 11 |
| Aroclor 1248 | ND | 42 | ug/kg | 11 |
| **Aroclor 1254** | **16 J J** | **42** | **ug/kg** | **11** |
| Aroclor 1260 | ND | 42 | ug/kg | 11 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 97 | (60 - 125) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC06/FLFA-SW-10-01'

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9G300243-006 | **Work Order #...:** | LHADT1AN | **Matrix.....:** | SO |
| **Date Sampled...:** | 07/27/09 | **Date Received..:** | 07/30/09 | | |
| **Prep Date.....:** | 07/30/09 | **Analysis Date..:** | 07/31/09 | | |
| **Prep Batch #...:** | 9211400 | | | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | 18 | **Method.....:** | SW846 8082 | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 40 | ug/kg | 10 |
| Aroclor 1221 | ND | 40 | ug/kg | 13 |
| Aroclor 1232 | ND | 40 | ug/kg | 10 |
| Aroclor 1242 | ND | 40 | ug/kg | 10 |
| Aroclor 1248 | ND | 40 | ug/kg | 10 |
| **Aroclor 1254** | **21 J** J | **40** | **ug/kg** | **10** |
| Aroclor 1260 | ND | 40 | ug/kg | 10 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 97 | (60 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

J Estimated result Result is less than RL.

# Form I Copy

Shaw E & I Inc

Client Sample ID: LFSC07/FLFA-FL-7-2-3'

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9G300243-007 | **Work Order #...:** | LHADW1AG | **Matrix.....:** | SO |
| **Date Sampled...:** | 07/28/09 | **Date Received..:** | 07/30/09 | | |
| **Prep Date.....:** | 07/30/09 | **Analysis Date..:** | 07/31/09 | | |
| **Prep Batch #...:** | 9211400 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 16 | **Method.....:** | SW846 8082 | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 39 | ug/kg | 9.8 |
| Aroclor 1221 | ND | 39 | ug/kg | 12 |
| Aroclor 1232 | ND | 39 | ug/kg | 9.8 |
| Aroclor 1242 | ND | 39 | ug/kg | 9.8 |
| Aroclor 1248 | ND | 39 | ug/kg | 9.8 |
| Aroclor 1254 | ND | 39 | ug/kg | 9.8 |
| Aroclor 1260 | ND | 39 | ug/kg | 9.8 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 95 | (60 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Form I Copy

Shaw E & I Inc

Client Sample ID: TMSC01

GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | G9G300243-008 | **Work Order #...:** | LHADX1AN | **Matrix.....:** | SO |
| **Date Sampled...:** | 07/28/09 | **Date Received..:** | 07/30/09 | | |
| **Prep Date.....:** | 07/30/09 | **Analysis Date..:** | 07/31/09 | | |
| **Prep Batch #...:** | 9211400 | | | | |
| **Dilution Factor:** | 0.99 | | | | |
| **% Moisture.....:** | 17 | **Method.....:** | SW846 8082 | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 39 | ug/kg | 9.9 |
| Aroclor 1221 | ND | 39 | ug/kg | 13 |
| Aroclor 1232 | ND | 39 | ug/kg | 9.9 |
| Aroclor 1242 | ND | 39 | ug/kg | 9.9 |
| Aroclor 1248 | ND | 39 | ug/kg | 9.9 |
| Aroclor 1254 | ND | 39 | ug/kg | 9.9 |
| Aroclor 1260 | ND | 39 | ug/kg | 9.9 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 94 | (60 - 125) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

# Appendix B-3

# XRF Field Logs

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 | Pb |
|---|---|---|---|---|---|---|---|---|---|
| 32.52 | 8-Apr-09 | 13:20:27 | 1 | -0.0101 | | | | | |
| 66.02 | 8-Apr-09 | 13:23:24 | 2 | | Ex-situ | Si Blank | | 0-1 ft | <LOD |
| 65.61 | 8-Apr-09 | 13:27:29 | 3 | | Ex-situ | XRF 101 | | | 92.75449 |
| 66.83 | 8-Apr-09 | 13:31:15 | 4 | | Ex-situ | XRF 250 | | | 240.6364 |
| 65.41 | 8-Apr-09 | 13:33:58 | 5 | | Ex-situ | XRF 408 | | | 489.4439 |
| 67.34 | 8-Apr-09 | 13:42:30 | 6 | | Ex-situ | | NE 1 | 0 - 0.5 ft | 93.18143 |
| 67.52 | 8-Apr-09 | 13:46:56 | 7 | | Ex-situ | | NE 2 | 0 - .5Ft | 78.01354 |
| 66.12 | 8-Apr-09 | 13:50:55 | 8 | | Ex-situ | | NE 3 | 0-0.5 ft | 364.8485 |
| 65.85 | 8-Apr-09 | 13:53:46 | 9 | | Ex-situ | | NE 3 (R2) | 0-0.5 ft | 360.1924 |
| 66.36 | 8-Apr-09 | 13:57:59 | 10 | | Ex-situ | | NE 3 (R3) | 0-0.5 ft | 390.5592 |
| 69.4 | 8-Apr-09 | 14:03:27 | 11 | | Ex-situ | | NE 4 | 0-0.5 ft | 96.83952 |
| 67.8 | 8-Apr-09 | 14:07:57 | 12 | | Ex-situ | | NE 5 | 0-0.5 ft | 230.3073 |
| 66.73 | 8-Apr-09 | 14:11:53 | 13 | | Ex-situ | | NE 6 | 0-0.5 ft | 124.9663 |
| 67.09 | 8-Apr-09 | 14:15:10 | 14 | | Ex-situ | | NE 7 | 0-0.5 ft | 205.2343 |
| 65.64 | 8-Apr-09 | 14:19:48 | 15 | | Ex-situ | | NSP-FL-001 | 0-1 ft | 2063.228 |
| 65.95 | 8-Apr-09 | 14:22:35 | 16 | | Ex-situ | | NE 8 (R2) | 0-0.5 ft | 2126.211 |
| 66.77 | 8-Apr-09 | 14:27:44 | 17 | | Ex-situ | | NE 8 (R3) | 0-0.5 ft | 2497.489 |
| 67.18 | 8-Apr-09 | 14:32:21 | 18 | | Ex-situ | | NE 9 | 0-0.5 ft | 211.5562 |
| 65.82 | 8-Apr-09 | 14:35:52 | 19 | | Ex-situ | | NE 10 | 0-0.5 ft | 86.85015 |
| 66.06 | 8-Apr-09 | 14:38:57 | 20 | | Ex-situ | | NE 11 | 0-0.5 ft | 36.37911 |
| 65.4 | 8-Apr-09 | 14:42:33 | 21 | | Ex-situ | | NE 12 | 0-0.5 ft | 46.9987 |
| 67.29 | 8-Apr-09 | 14:45:37 | 22 | | Ex-situ | | NE 13 | 0-0.5 ft | 34.98448 |
| 67.72 | 8-Apr-09 | 14:49:33 | 23 | | Ex-situ | | NE 14 | 0-0.5 ft | 50.5783 |
| 65.59 | 8-Apr-09 | 14:53:00 | 24 | | Ex-situ | | NE 15 | 0-0.5 ft | 229.217 |
| 67.37 | 8-Apr-09 | 14:56:13 | 25 | | Ex-situ | | NE 16 | 0-0.5 ft | 49.24434 |
| 66.68 | 8-Apr-09 | 15:00:22 | 26 | | Ex-situ | | NE 17 | 0-0.5 ft | 122.2084 |
| 65.94 | 8-Apr-09 | 15:04:34 | 27 | | Ex-situ | | NE 18 | 0-0.5 ft | 200.4896 |
| 65.2 | 8-Apr-09 | 15:09:23 | 28 | | Ex-situ | | CA 1 | 0-0.5 ft | 170.1712 |
| 67.39 | 8-Apr-09 | 15:13:57 | 29 | | Ex-situ | | C 2 | 0-0.5 ft | 195.531 |
| 66.81 | 8-Apr-09 | 15:17:43 | 30 | | Ex-situ | | C 3 | 0-0.5 ft | 107.2828 |
| 66.65 | 8-Apr-09 | 15:21:42 | 31 | | Ex-situ | | C 4 | 0-0.5 ft | 180.1643 |
| 68.07 | 8-Apr-09 | 15:26:05 | 32 | | Ex-situ | | C 5 | 0-0.5 ft | 21.55195 |
| 67.17 | 8-Apr-09 | 15:30:49 | 33 | | Ex-situ | | CA 6 | 0-0.5 ft | 29.40278 |
| 66.51 | 8-Apr-09 | 15:35:12 | 34 | | Ex-situ | | CA 7 | 0-0.5 ft | 48.63537 |
| 64.55 | 8-Apr-09 | 15:38:12 | 35 | | Ex-situ | | CA 8 | 0-0.5 ft | 337.4788 |
| 67.4 | 8-Apr-09 | 15:41:21 | 36 | | Ex-situ | | CA 8 (R2) | 0-0.5 ft | 325.0409 |
| 66.3 | 8-Apr-09 | 15:44:15 | 37 | | Ex-situ | | CA 8 (R3) | 0-0.5 ft | 359.1915 |
| 63.7 | 8-Apr-09 | 15:47:06 | 38 | | Ex-situ | | CA 9 | 0-0.5 ft | 1502.287 |
| 65.67 | 8-Apr-09 | 15:50:33 | 39 | | Ex-situ | | CA 10 | 0-0.5 ft | 268.9156 |
| 65.55 | 8-Apr-09 | 15:54:55 | 40 | | Ex-situ | | CA 11 | 0-0.5 ft | 798.3084 |
| 68.03 | 8-Apr-09 | 15:58:50 | 41 | | Ex-situ | Si Blank | | 0-1 ft | <LOD |
| 68.69 | 8-Apr-09 | 16:01:46 | 42 | | Ex-situ | XRF-250 | | 0-1 ft | 259.4099 |

| Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- | Hg |
|---|---|---|---|---|---|---|---|---|---|
| 5.181138 | <LOD | 3.365758 | <LOD | 13.14709 | <LOD | 28.32552 | <LOD | 5.856434 | <LOD |
| 3.682318 | <LOD | 8.012072 | <LOD | 12.873 | <LOD | 27.79353 | <LOD | 5.595179 | <LOD |
| 5.966105 | <LOD | 12.74288 | <LOD | 14.9099 | <LOD | 33.05805 | <LOD | 7.665211 | <LOD |
| 10.89605 | 426.4972 | 10.22187 | <LOD | 18.94657 | <LOD | 49.10007 | 13.04858 | 3.902925 | 505.3232 |
| 4.090983 | 11.51646 | 3.156286 | 77.84386 | 7.194698 | <LOD | 38.40966 | 244.3991 | 7.489063 | <LOD |
| 3.834074 | 10.29137 | 2.958107 | 71.50554 | 7.102253 | <LOD | 38.7693 | 244.1486 | 7.497156 | <LOD |
| 7.759779 | 38.01073 | 5.761792 | 1829.545 | 26.56475 | <LOD | 39.11381 | 977.3705 | 16.3129 | <LOD |
| 7.784416 | 40.14707 | 5.805415 | 1933.674 | 27.77503 | <LOD | 40.51392 | 967.0967 | 16.41097 | <LOD |
| 8.065945 | 41.76119 | 5.972133 | 714.4892 | 15.81777 | <LOD | 39.02799 | 1237.369 | 18.44073 | <LOD |
| 4.220042 | <LOD | 9.416201 | <LOD | 17.6547 | <LOD | 34.9812 | 115.4871 | 5.43805 | <LOD |
| 6.212764 | <LOD | 13.44583 | 18.66178 | 6.151518 | <LOD | 39.54842 | 108.9414 | 5.325338 | <LOD |
| 4.646958 | <LOD | 10.38171 | 46.68974 | 6.650729 | <LOD | 39.07695 | 202.8793 | 6.879413 | <LOD |
| 5.581398 | <LOD | 12.35911 | 51.35558 | 6.410222 | <LOD | 35.08021 | 179.5819 | 6.272673 | <LOD |
| 23.3974 | <LOD | 38.95916 | 130.9443 | 8.469878 | <LOD | 40.31139 | 542.5503 | 11.5275 | <LOD |
| 24.11897 | <LOD | 39.56831 | 141.0887 | 8.705216 | <LOD | 40.06491 | 518.6973 | 11.35031 | <LOD |
| 27.47373 | <LOD | 42.90073 | 150.3551 | 8.931403 | <LOD | 39.62619 | 487.8182 | 11.09408 | <LOD |
| 6.005093 | 14.53546 | 4.490286 | <LOD | 18.50229 | <LOD | 39.38072 | 121.7052 | 5.603942 | <LOD |
| 3.784147 | <LOD | 8.564833 | 28.67747 | 5.891942 | <LOD | 34.60667 | 70.9683 | 4.254287 | <LOD |
| 3.010178 | <LOD | 6.695787 | <LOD | 16.87077 | <LOD | 38.8555 | 51.10172 | 3.974592 | <LOD |
| 2.97689 | <LOD | 6.650768 | <LOD | 15.23028 | <LOD | 32.49657 | 20.57194 | 2.913078 | <LOD |
| 3.029661 | <LOD | 6.728031 | <LOD | 17.75085 | <LOD | 38.01875 | 48.02445 | 3.969987 | <LOD |
| 3.350443 | <LOD | 7.420368 | <LOD | 16.78723 | <LOD | 37.07932 | 51.95147 | 4.036091 | <LOD |
| 5.874895 | <LOD | 12.91669 | <LOD | 15.42625 | <LOD | 34.05042 | 63.37645 | 4.09866 | <LOD |
| 3.43054 | 8.87973 | 2.659232 | <LOD | 17.37504 | <LOD | 41.6094 | 72.15965 | 4.631368 | <LOD |
| 4.595402 | <LOD | 10.44001 | 45.43532 | 6.626022 | <LOD | 39.29522 | 209.3119 | 6.973466 | <LOD |
| 5.501484 | <LOD | 12.20717 | 80.94165 | 6.994724 | <LOD | 36.51194 | 439.4519 | 9.676277 | <LOD |
| 5.109012 | 16.05642 | 3.889146 | 138.2626 | 7.97735 | <LOD | 36.64889 | 440.9755 | 9.737032 | <LOD |
| 5.622747 | 20.03129 | 4.281447 | 166.3862 | 8.680691 | <LOD | 36.58708 | 525.1032 | 11.03297 | <LOD |
| 4.224664 | <LOD | 9.453929 | <LOD | 17.10618 | <LOD | 35.64148 | 196.0442 | 6.559366 | <LOD |
| 5.300412 | <LOD | 11.80559 | 34.43593 | 6.170815 | <LOD | 35.79874 | 280.0424 | 7.781438 | <LOD |
| 2.353767 | <LOD | 5.126623 | <LOD | 14.18025 | <LOD | 28.57644 | 50.97005 | 3.652708 | <LOD |
| 2.712367 | <LOD | 6.03047 | <LOD | 15.60682 | <LOD | 35.27136 | 69.4517 | 4.258943 | <LOD |
| 3.145939 | <LOD | 7.049951 | 22.18357 | 5.906595 | <LOD | 36.06105 | 131.0603 | 5.495087 | <LOD |
| 7.049315 | <LOD | 15.28381 | 260.9025 | 9.708844 | <LOD | 35.13059 | 1359.724 | 18.40674 | <LOD |
| 7.197469 | 24.90438 | 5.313059 | 295.4254 | 10.5992 | <LOD | 37.27184 | 1530.575 | 20.67339 | <LOD |
| 7.394257 | <LOD | 15.79112 | 293.6946 | 10.27306 | <LOD | 34.91557 | 1160.223 | 16.93746 | <LOD |
| 20.11032 | 43.06139 | 12.04386 | 1532.778 | 26.51823 | 142.5428 | 21.89313 | 5111.524 | 55.2644 | <LOD |
| 5.978125 | <LOD | 12.93835 | 118.2477 | 7.088799 | <LOD | 28.72784 | 491.5599 | 9.715365 | <LOD |
| 11.80513 | <LOD | 23.0718 | 103.1723 | 7.444494 | <LOD | 34.02027 | 377.3932 | 9.089906 | <LOD |
| 5.188807 | <LOD | 3.285817 | <LOD | 12.40898 | <LOD | 27.81396 | <LOD | 5.607624 | <LOD |
| 6.348557 | <LOD | 13.61133 | <LOD | 15.63248 | <LOD | 32.22436 | 8.641878 | 2.659789 | <LOD |

| Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- | Sn |
|---|---|---|---|---|---|---|---|---|---|
| 6.179117 | <LOD | 75.70297 | 305.9119 | 16.63262 | <LOD | 51.16299 | <LOD | 38.44067 | <LOD |
| 6.38091 | <LOD | 73.72131 | <LOD | 25.93196 | <LOD | 63.13728 | 101.8127 | 12.92208 | <LOD |
| 7.630449 | <LOD | 73.16797 | 5404.348 | 72.70411 | <LOD | 78.43385 | <LOD | 38.58065 | <LOD |
| 12.72168 | <LOD | 83.09335 | 34560.34 | 331.4011 | 389.8644 | 49.73026 | 381.4242 | 16.04758 | <LOD |
| 6.826632 | <LOD | 79.36108 | 21522.54 | 207.4229 | <LOD | 90.3121 | <LOD | 41.09116 | <LOD |
| 7.224565 | <LOD | 79.22144 | 23316.78 | 221.9559 | <LOD | 95.8742 | <LOD | 40.68832 | <LOD |
| 7.830432 | <LOD | 78.18144 | 23438.3 | 223.5879 | <LOD | 108.6374 | <LOD | 40.44659 | <LOD |
| 8.61025 | <LOD | 79.19026 | 23701.75 | 227.9321 | 111.9768 | 37.09181 | <LOD | 41.31416 | <LOD |
| 8.603598 | <LOD | 78.3477 | 22985.86 | 220.494 | <LOD | 109.5483 | <LOD | 41.13804 | <LOD |
| 7.460116 | <LOD | 80.24298 | 16536.62 | 171.5111 | <LOD | 81.40102 | <LOD | 41.50336 | <LOD |
| 7.947729 | <LOD | 80.83637 | 22993.79 | 222.7471 | <LOD | 91.2486 | <LOD | 41.90392 | <LOD |
| 7.454967 | <LOD | 79.49512 | 23841.37 | 226.3108 | <LOD | 93.72224 | <LOD | 41.22566 | <LOD |
| 6.958167 | <LOD | 75.00765 | 14782.42 | 149.2151 | <LOD | 77.58192 | <LOD | 39.39177 | <LOD |
| 11.62796 | <LOD | 79.72209 | 21042.83 | 208.2598 | <LOD | 100.5797 | <LOD | 41.53112 | <LOD |
| 11.67354 | <LOD | 81.14162 | 21744.85 | 215.6662 | <LOD | 102.0859 | <LOD | 42.31963 | <LOD |
| 11.5623 | <LOD | 79.93468 | 19354.43 | 198.1801 | <LOD | 100.4731 | <LOD | 42.15759 | <LOD |
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| 6.368133 | <LOD | 77.71118 | 15631.34 | 153.9457 | <LOD | 82.2439 | <LOD | 39.98453 | <LOD |
| 7.28862 | <LOD | 79.67226 | 25272.77 | 236.2552 | <LOD | 99.25853 | <LOD | 41.16981 | <LOD |
| 5.832109 | <LOD | 76.28346 | 12763.63 | 129.7001 | <LOD | 74.62356 | <LOD | 38.96364 | <LOD |
| 7.018745 | <LOD | 80.29126 | 20902.66 | 205.728 | <LOD | 96.47967 | <LOD | 41.92598 | <LOD |
| 7.053479 | <LOD | 80.26254 | 20974.03 | 205.7448 | <LOD | 91.06386 | <LOD | 41.4862 | <LOD |
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| 7.061393 | <LOD | 79.43288 | 26432.54 | 246.5116 | <LOD | 100.3769 | <LOD | 41.2506 | <LOD |
| 7.355854 | <LOD | 74.85859 | 19394.82 | 183.8739 | <LOD | 85.09798 | <LOD | 39.34491 | <LOD |
| 7.175363 | <LOD | 75.14882 | 22736.66 | 209.4521 | <LOD | 93.83444 | <LOD | 39.32811 | <LOD |
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| 6.525324 | <LOD | 78.16733 | 15631.9 | 156.889 | <LOD | 83.18245 | <LOD | 40.41941 | <LOD |
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| 8.415775 | <LOD | 77.3419 | 17056.04 | 171.0044 | <LOD | 91.87944 | <LOD | 40.52755 | <LOD |
| 7.912004 | <LOD | 75.42722 | 12878.67 | 134.4647 | <LOD | 85.75493 | <LOD | 39.59845 | <LOD |
| 13.6302 | <LOD | 86.58118 | 52811.46 | 496.1562 | 454.4335 | 57.89555 | <LOD | 44.93018 | <LOD |
| 6.503093 | <LOD | 72.12929 | 5022.499 | 66.18235 | <LOD | 71.66325 | <LOD | 37.34045 | <LOD |
| 8.689175 | <LOD | 76.56248 | 11191.7 | 122.3984 | <LOD | 78.67042 | <LOD | 40.01474 | <LOD |
| 5.605268 | <LOD | 72.84108 | 368.223 | 18.00313 | <LOD | 53.97376 | <LOD | 38.0718 | <LOD |
| 6.973419 | <LOD | 71.04398 | 5753.825 | 77.60889 | <LOD | 76.32625 | <LOD | 38.90471 | <LOD |

| Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- | Mo |
|---|---|---|---|---|---|---|---|---|---|
| 72.01025 | <LOD | 53.33089 | <LOD | 68.67378 | <LOD | 2.027525 | <LOD | 28.0655 | 18.74305 |
| 70.62307 | <LOD | 54.04939 | <LOD | 70.18935 | <LOD | 1.526952 | <LOD | 27.28646 | 37.33443 |
| 70.53635 | <LOD | 54.71758 | <LOD | 119.238 | <LOD | 6.307627 | <LOD | 41.218 | 45.19494 |
| 80.8768 | 356.8783 | 22.41852 | <LOD | 199.3352 | 20.44175 | 5.736101 | <LOD | 86.0228 | 36.78863 |
| 75.98061 | <LOD | 57.59904 | <LOD | 126.0324 | 22.94033 | 4.315951 | 176.0862 | 24.69335 | 48.83107 |
| 75.3908 | <LOD | 57.52969 | <LOD | 128.566 | 17.72157 | 4.448982 | 178.1225 | 25.33244 | 44.90466 |
| 75.00641 | <LOD | 57.63633 | <LOD | 137.608 | 22.98094 | 4.519629 | 225.3793 | 27.07532 | 46.91101 |
| 76.41476 | <LOD | 58.23335 | <LOD | 138.3286 | 14.45845 | 4.531358 | 292.1186 | 28.726 | 49.06213 |
| 75.76002 | <LOD | 57.97278 | <LOD | 140.9845 | <LOD | 13.24701 | 266.3699 | 27.8166 | 46.88432 |
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| 77.58771 | <LOD | 58.65861 | <LOD | 139.217 | 17.42224 | 4.483592 | 232.3371 | 26.67304 | 29.1773 |
| 75.80634 | <LOD | 57.81153 | <LOD | 138.2308 | 22.51352 | 4.532774 | 203.9103 | 26.00222 | 52.78146 |
| 72.37073 | <LOD | 55.56479 | <LOD | 117.1498 | 12.3736 | 3.461566 | 378.7015 | 26.23571 | 42.11304 |
| 76.82427 | <LOD | 58.48296 | <LOD | 139.978 | 15.1136 | 4.322055 | 296.5324 | 28.24818 | 37.58863 |
| 78.07132 | <LOD | 59.38817 | <LOD | 141.3518 | 14.65214 | 4.419518 | 286.3164 | 28.45123 | 44.90874 |
| 77.14935 | <LOD | 59.65914 | <LOD | 139.6656 | <LOD | 12.6106 | 246.2801 | 27.36472 | 35.70549 |
| 77.74123 | <LOD | 58.89724 | <LOD | 155.6252 | 20.9582 | 4.76192 | 492.1448 | 32.41362 | 37.80074 |
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| 76.89593 | <LOD | 58.57994 | <LOD | 154.4013 | <LOD | 12.67147 | 231.51 | 26.31111 | 38.00516 |
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| 76.28296 | <LOD | 57.75978 | <LOD | 133.0266 | 22.28419 | 4.747272 | 167.2058 | 25.95078 | 33.46318 |
| 71.94254 | <LOD | 55.34202 | <LOD | 125.7274 | 16.72631 | 3.935143 | 249.7558 | 24.88751 | 40.71232 |
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| 73.98402 | <LOD | 56.14683 | <LOD | 122.4076 | <LOD | 11.29183 | 227.6932 | 24.26776 | 34.09679 |
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| 74.95609 | <LOD | 56.37853 | <LOD | 124.2151 | <LOD | 10.42729 | 155.1849 | 22.12641 | 35.89719 |
| 75.23563 | <LOD | 56.27673 | <LOD | 127.1311 | <LOD | 11.50466 | 97.8271 | 21.81833 | 33.40083 |
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| 72.90805 | <LOD | 55.95404 | <LOD | 119.8993 | <LOD | 9.469698 | 358.2536 | 25.80898 | 46.97215 |
| 84.70219 | <LOD | 64.50289 | <LOD | 221.7223 | 39.27452 | 7.322198 | 1347.441 | 54.34105 | 52.99204 |
| 69.2493 | <LOD | 52.5099 | <LOD | 93.77404 | <LOD | 5.760936 | 119.6257 | 17.1574 | 37.2422 |
| 73.67539 | <LOD | 56.35685 | <LOD | 110.8558 | <LOD | 9.051022 | 188.4041 | 21.90372 | 43.5089 |
| 70.21544 | <LOD | 53.5712 | <LOD | 65.90111 | <LOD | 2.180849 | <LOD | 30.90939 | 36.72241 |
| 68.80055 | <LOD | 56.07513 | <LOD | 118.6157 | <LOD | 6.593547 | <LOD | 42.21083 | 67.60183 |

| Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- | Zr |
|---|---|---|---|---|---|---|---|---|---|
| 5.190986 | <LOD | 2.107443 | <LOD | 2.036311 | 6.148609 | 0.966115 | <LOD | 412.7018 | 23.06291 |
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| 6.58746 | 26.55948 | 1.458458 | 501.1099 | 7.981072 | 237.2269 | 3.871746 | 9818.208 | 498.2016 | 271.5996 |
| 5.948355 | 50.62391 | 1.628225 | <LOD | 2.476555 | 51.93383 | 1.714439 | 3108.447 | 299.9707 | 107.0834 |
| 5.919601 | 52.68213 | 1.65713 | <LOD | 2.55338 | 40.0263 | 1.568692 | 2566.633 | 295.8002 | 93.69224 |
| 5.99744 | 38.56115 | 1.487535 | <LOD | 3.041168 | 81.04502 | 2.06676 | 3125.727 | 317.2589 | 117.221 |
| 6.078413 | 42.61533 | 1.561037 | <LOD | 3.002483 | 85.36539 | 2.136548 | 3198.284 | 320.5097 | 123.0905 |
| 6.043073 | 38.97375 | 1.49906 | <LOD | 3.10237 | 84.68575 | 2.113398 | 2972.714 | 320.1968 | 139.2217 |
| 6.080828 | 31.37605 | 1.386166 | <LOD | 2.479127 | 123.8259 | 2.54876 | 1700.077 | 272.748 | 88.5386 |
| 6.003551 | 47.28394 | 1.618061 | <LOD | 2.866747 | 44.64588 | 1.658165 | 2753.956 | 316.5984 | 140.822 |
| 6.124693 | 57.28601 | 1.725792 | <LOD | 2.585375 | 45.85605 | 1.65038 | 4147.82 | 333.1718 | 197.0011 |
| 5.742894 | 64.8538 | 1.759305 | <LOD | 2.534707 | 42.82648 | 1.554283 | 3347.988 | 286.1334 | 120.0382 |
| 6.123431 | 40.05025 | 1.632887 | <LOD | 4.952621 | 75.13259 | 2.076117 | 3936.605 | 334.5575 | 145.5006 |
| 6.215955 | 43.75087 | 1.700422 | <LOD | 5.058349 | 78.81052 | 2.136008 | 3863.619 | 336.7061 | 147.4169 |
| 6.221047 | 41.30787 | 1.701763 | <LOD | 5.381145 | 71.32334 | 2.077872 | 3603.488 | 331.2179 | 138.6166 |
| 6.285653 | 48.10987 | 1.642805 | <LOD | 2.699574 | 69.38062 | 1.970708 | 6621.677 | 392.5629 | 275.9929 |
| 5.582084 | 22.59079 | 1.156228 | <LOD | 2.293384 | 26.67738 | 1.32287 | 3230.437 | 282.6957 | 111.1899 |
| 6.056641 | 66.20467 | 1.826211 | <LOD | 2.319903 | 43.27124 | 1.608994 | 5750.776 | 364.5836 | 218.1447 |
| 5.534293 | 22.14014 | 1.125563 | <LOD | 2.096766 | 19.59768 | 1.202042 | 2570.547 | 264.5598 | 118.5554 |
| 6.20705 | 83.3773 | 2.069769 | <LOD | 2.310977 | 64.65652 | 1.901155 | 6222.571 | 384.2348 | 251.4754 |
| 6.147017 | 66.72379 | 1.859911 | <LOD | 2.385443 | 46.85299 | 1.67864 | 5573.34 | 362.0396 | 230.4649 |
| 5.970339 | 44.00396 | 1.496071 | <LOD | 2.338005 | 54.25324 | 1.691054 | 5086.454 | 326.4986 | 301.5629 |
| 6.378336 | 48.88304 | 1.664196 | <LOD | 2.572016 | 56.82549 | 1.840889 | 8036.715 | 413.5316 | 271.8518 |
| 5.889828 | 51.57614 | 1.647055 | <LOD | 2.583542 | 39.51216 | 1.564901 | 2957.381 | 308.7184 | 109.9347 |
| 5.674449 | 49.46844 | 1.560591 | <LOD | 2.484481 | 50.68305 | 1.6413 | 1787.58 | 275.9633 | 93.26827 |
| 5.754472 | 50.12683 | 1.572246 | <LOD | 2.224736 | 52.18309 | 1.662723 | 3413.596 | 312.8088 | 159.0435 |
| 5.919913 | 35.97751 | 1.429837 | <LOD | 2.614528 | 110.8643 | 2.363078 | 2507.493 | 280.8717 | 99.02647 |
| 5.772433 | 46.48565 | 1.533864 | <LOD | 2.536146 | 29.84583 | 1.395882 | 2983.963 | 284.2968 | 94.24209 |
| 5.794793 | 43.16804 | 1.493937 | <LOD | 2.638466 | 31.78929 | 1.426639 | 3099.234 | 291.425 | 148.0004 |
| 5.500619 | 9.545916 | 0.898874 | <LOD | 1.871387 | 12.24081 | 1.08984 | 922.5274 | 192.8936 | 95.90817 |
| 5.746706 | 25.84732 | 1.226355 | <LOD | 2.241879 | 23.31294 | 1.300715 | 3356.3 | 297.222 | 118.0523 |
| 5.791372 | 16.29064 | 1.069089 | <LOD | 2.257248 | 15.9106 | 1.195321 | 3279.742 | 300.9374 | 157.514 |
| 5.611012 | 14.3089 | 1.030971 | <LOD | 2.70949 | 33.82225 | 1.416711 | 3163.664 | 286.8268 | 69.22032 |
| 5.917221 | 14.65428 | 1.083064 | <LOD | 2.903903 | 57.3078 | 1.769391 | 3426.836 | 311.7755 | 94.48132 |
| 5.728323 | 13.88836 | 1.041439 | <LOD | 2.700032 | 35.89922 | 1.467194 | 3495.744 | 291.5713 | 89.56415 |
| 6.588772 | 16.84289 | 1.364831 | <LOD | 4.910712 | 137.9153 | 2.935292 | 8512.117 | 523.754 | 71.60492 |
| 5.320651 | 5.311957 | 0.811244 | <LOD | 2.422961 | 14.97917 | 1.102599 | 671.0435 | 200.6425 | 78.6853 |
| 5.792618 | 29.23968 | 1.331705 | <LOD | 3.181288 | 28.1913 | 1.395889 | 1935.816 | 255.3534 | 101.3755 |
| 5.325162 | <LOD | 2.128586 | <LOD | 2.099459 | 8.19587 | 1.00702 | <LOD | 377.5427 | 19.50387 |
| 6.4258 | 14.30098 | 1.07959 | <LOD | 2.590745 | 135.7011 | 2.578468 | 5241.399 | 315.336 | 446.6285 |

| Zr +/- |
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| 4.803338 |
| 4.012848 |
| 2.372366 |
| 2.262929 |
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| 2.267618 |
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| 2.437884 |
| 1.932412 |
| 2.271177 |
| 1.512739 |
| 4.936763 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 33.3 | 15-Apr-09 | 9:22:20 | 1 | -0.0305 | | | | |
| 66.54 | 15-Apr-09 | 9:24:17 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 65.93 | 15-Apr-09 | 9:28:04 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 66.95 | 15-Apr-09 | 9:30:35 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 66.62 | 15-Apr-09 | 9:41:49 | 5 | | Ex-situ | XRF 408 | | 0-1 ft |
| 67.98 | 15-Apr-09 | 9:49:20 | 6 | | Ex-situ | | NW-2 | 0-0.5 ft |
| 66.08 | 15-Apr-09 | 9:53:38 | 7 | | Ex-situ | | CA-7 | 0-1 ft |
| 67.79 | 15-Apr-09 | 9:57:14 | 8 | | Ex-situ | | NW-5 | 0-1 ft |
| 65.9 | 15-Apr-09 | 10:32:09 | 9 | | Ex-situ | | CA-12 | 0-1 ft |
| 66.37 | 15-Apr-09 | 10:35:23 | 10 | | Ex-situ | | CA-16 | 0-1 ft |
| 68.63 | 15-Apr-09 | 10:38:31 | 11 | | Ex-situ | | CA-13 | 0-1 ft |
| 65.95 | 15-Apr-09 | 10:42:08 | 12 | | Ex-situ | | CA-15 | 0-1 ft |
| 67.33 | 15-Apr-09 | 10:45:26 | 13 | | Ex-situ | | CA-14 | 0-1 ft |
| 70.65 | 15-Apr-09 | 10:48:40 | 14 | | Ex-situ | | NW-1 | 0-1 ft |
| 68.94 | 15-Apr-09 | 10:51:25 | 15 | | Ex-situ | | NW3 | 0-1 ft |
| 71.47 | 15-Apr-09 | 10:54:11 | 16 | | Ex-situ | | NW-4 | 0-1 ft |
| 71.45 | 15-Apr-09 | 10:57:05 | 17 | | Ex-situ | | NW-6 | 0-1 ft |
| 80.17 | 15-Apr-09 | 11:26:39 | 18 | | Ex-situ | | SSP-SW-10 | 0-1 ft |
| 33.01 | 15-Apr-09 | 12:53:34 | 19 | -0.0307 | | | | |
| 69.86 | 15-Apr-09 | 12:55:29 | 20 | | Ex-situ | Si Blank | | 0-1 ft |
| 68.91 | 15-Apr-09 | 12:58:32 | 21 | | Ex-situ | XRF 250 | | 0-1 ft |
| 70.83 | 15-Apr-09 | 13:39:40 | 22 | | Ex-situ | | SSP-FL-3M | 0-1 ft |
| 71.13 | 15-Apr-09 | 13:43:15 | 23 | | Ex-situ | | SSP-FL-3L | 0-1 ft |
| 72.29 | 15-Apr-09 | 13:46:39 | 24 | | Ex-situ | | SSP-SW-11 | 0-1 ft |
| 71.2 | 15-Apr-09 | 13:49:09 | 25 | | Ex-situ | | SSP-SW-12 | 0-1 ft |
| 70.79 | 15-Apr-09 | 14:21:40 | 26 | | Ex-situ | | SSP-FL-3K | 0-1 ft |
| 70.3 | 15-Apr-09 | 14:24:33 | 27 | | Ex-situ | | SSP-FL-3J | 0-1 ft |
| 70.58 | 15-Apr-09 | 14:27:23 | 28 | | Ex-situ | | SSP-SW-13 | 0-1 ft |
| 70.11 | 15-Apr-09 | 14:30:12 | 29 | | Ex-situ | | SSP-sw-14 | 0-1 ft |
| 0.1 | 15-Apr-09 | 15:09:51 | 30 | 0 | | | | |
| 36.73 | 15-Apr-09 | 15:10:01 | 31 | -0.0297 | | | | |
| 70.27 | 15-Apr-09 | 15:12:08 | 32 | | Ex-situ | Si Blank | | 0-1 ft |
| 69.38 | 15-Apr-09 | 15:15:00 | 33 | | Ex-situ | XRF 250 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 4.722757 | <LOD | 3.158985 | <LOD | 12.29874 | <LOD | 26.71378 | <LOD | 5.636078 |
| 99.34242 | 3.779565 | <LOD | 8.267056 | <LOD | 12.08574 | <LOD | 26.39961 | <LOD | 5.352657 |
| 240.8589 | 6.039036 | <LOD | 13.19611 | <LOD | 14.73572 | <LOD | 32.53536 | 13.06197 | 2.764184 |
| 478.3522 | 10.8479 | 440.8558 | 10.35627 | <LOD | 18.68221 | <LOD | 46.61808 | 17.26339 | 4.012486 |
| 32.61959 | 2.863784 | <LOD | 6.466709 | <LOD | 16.11102 | <LOD | 37.1981 | 81.67545 | 4.60867 |
| 1483.792 | 19.55306 | 61.73356 | 11.81467 | 1303.685 | 23.53812 | <LOD | 49.44704 | 3693.719 | 42.06499 |
| 40.15134 | 2.975802 | <LOD | 6.551301 | <LOD | 16.9875 | <LOD | 34.35506 | 97.054 | 4.862875 |
| 2348.43 | 25.8682 | 43.16863 | 13.89968 | 217.5061 | 9.976323 | <LOD | 40.78711 | 1667.942 | 22.61566 |
| 489.1869 | 8.790109 | 23.88123 | 6.220693 | 347.9345 | 11.04529 | <LOD | 35.4959 | 1700.278 | 21.67633 |
| 98.33329 | 4.302402 | 13.4268 | 3.336861 | 23.11203 | 6.289159 | <LOD | 39.24417 | 165.0356 | 6.386667 |
| 2504.366 | 28.86544 | 101.2884 | 15.43048 | 1000.029 | 20.6367 | <LOD | 51.30743 | 4637.799 | 50.61187 |
| 1764.275 | 21.61504 | 45.30854 | 12.48156 | 920.4854 | 19.05466 | <LOD | 45.64057 | 3328.413 | 38.01823 |
| 85.92661 | 4.051134 | <LOD | 9.014239 | 39.5901 | 6.512354 | <LOD | 35.85724 | 104.4947 | 5.264946 |
| 28.66589 | 2.641443 | <LOD | 6.099975 | <LOD | 15.04378 | <LOD | 31.73768 | 82.14016 | 4.450778 |
| 42.08564 | 3.074872 | <LOD | 6.86001 | <LOD | 16.36949 | <LOD | 32.77689 | 115.5884 | 5.315568 |
| 83.86527 | 4.144423 | <LOD | 9.419102 | 34.05239 | 6.623209 | <LOD | 36.81548 | 170.6617 | 6.670127 |
| 24.52997 | 3.902265 | <LOD | 8.736814 | <LOD | 21.48763 | <LOD | 50.74534 | 47.62028 | 5.445749 |
| <LOD | 4.947252 | <LOD | 3.258898 | <LOD | 12.26507 | <LOD | 25.31496 | <LOD | 5.59449 |
| 237.652 | 6.08683 | <LOD | 12.99559 | <LOD | 15.28577 | <LOD | 32.50589 | 11.82739 | 2.767594 |
| 21.18017 | 3.025245 | <LOD | 6.781499 | <LOD | 17.65038 | <LOD | 45.77104 | 85.47474 | 5.290768 |
| 67.65929 | 4.232539 | <LOD | 9.648684 | <LOD | 18.77514 | <LOD | 50.84907 | 90.76102 | 5.533071 |
| 10.63125 | 2.563867 | <LOD | 5.585861 | <LOD | 16.42244 | <LOD | 39.96932 | 45.28027 | 4.103361 |
| 13.15143 | 2.6851 | <LOD | 6.177514 | <LOD | 17.17296 | <LOD | 42.62902 | 59.99049 | 4.531857 |
| 22.62884 | 3.102895 | <LOD | 6.603634 | <LOD | 16.95304 | <LOD | 46.58302 | 83.35219 | 5.210601 |
| 18.27152 | 2.98044 | <LOD | 6.809313 | <LOD | 16.3005 | <LOD | 44.52235 | 76.05342 | 5.083827 |
| 8.483844 | 2.483368 | <LOD | 5.436522 | <LOD | 16.68553 | <LOD | 39.98388 | 60.17705 | 4.436809 |
| <LOD | 6.628069 | <LOD | 4.765364 | <LOD | 15.22841 | <LOD | 34.2842 | 38.17447 | 3.700159 |
| <LOD | 4.811938 | <LOD | 3.226741 | <LOD | 12.2636 | <LOD | 26.03287 | <LOD | 5.730295 |
| 231.8095 | 6.029437 | <LOD | 13.10607 | <LOD | 15.05724 | <LOD | 31.43901 | <LOD | 7.589895 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.555716 | <LOD | 74.29193 | 260.0255 | 15.56078 | <LOD | 52.63165 | <LOD | 37.86247 |
| <LOD | 5.772767 | <LOD | 73.41508 | <LOD | 24.9913 | <LOD | 62.82001 | 112.4849 | 12.80192 |
| <LOD | 7.212423 | <LOD | 73.89903 | 5614.689 | 75.34348 | <LOD | 74.98116 | <LOD | 39.11159 |
| 481.1884 | 12.50836 | <LOD | 82.49783 | 34184.85 | 331.1612 | 515.432 | 52.59666 | 363.5174 | 15.97617 |
| <LOD | 6.611857 | <LOD | 77.47896 | 19598.14 | 190.9619 | <LOD | 81.62344 | <LOD | 40.53339 |
| <LOD | 12.90811 | <LOD | 81.06055 | 32069.69 | 313.478 | 321.0155 | 48.81157 | <LOD | 43.5929 |
| <LOD | 6.665996 | <LOD | 76.49217 | 14672.24 | 150.0256 | <LOD | 76.09486 | <LOD | 39.92457 |
| <LOD | 12.04605 | <LOD | 76.17589 | 26204.99 | 250.6339 | <LOD | 114.773 | <LOD | 41.27755 |
| <LOD | 8.220603 | <LOD | 71.2856 | 18710 | 179.876 | 107.3963 | 33.7541 | <LOD | 38.71606 |
| <LOD | 7.41017 | <LOD | 79.59451 | 25684.92 | 245.9423 | <LOD | 97.2818 | <LOD | 42.07546 |
| <LOD | 15.02004 | <LOD | 80.53183 | 34517 | 337.1631 | 246.9071 | 48.22769 | <LOD | 43.82671 |
| <LOD | 12.37995 | <LOD | 75.76183 | 30530.35 | 294.1212 | <LOD | 120.1188 | <LOD | 41.86815 |
| <LOD | 7.091586 | <LOD | 76.00606 | 19120.68 | 193.1611 | <LOD | 88.87877 | <LOD | 41.61638 |
| <LOD | 6.052088 | <LOD | 71.69879 | 12374.21 | 129.7317 | <LOD | 77.36273 | <LOD | 38.82418 |
| <LOD | 6.632797 | <LOD | 71.32373 | 13646.58 | 145.5233 | <LOD | 77.2785 | <LOD | 39.93759 |
| <LOD | 6.909976 | <LOD | 76.37109 | 19698.51 | 204.3117 | <LOD | 88.54456 | <LOD | 43.09047 |
| <LOD | 8.87112 | <LOD | 107.5441 | 23791.05 | 321.3114 | <LOD | 122.3257 | <LOD | 57.60727 |
| <LOD | 5.23373 | <LOD | 72.10638 | 272.5524 | 16.30313 | <LOD | 51.3531 | <LOD | 38.28855 |
| <LOD | 7.376706 | <LOD | 72.90236 | 5446.889 | 75.0789 | <LOD | 79.33951 | <LOD | 39.70934 |
| <LOD | 8.181605 | <LOD | 84.33688 | 38172.91 | 376.1635 | <LOD | 112.1517 | <LOD | 45.98279 |
| <LOD | 7.794003 | <LOD | 83.75621 | 52052.02 | 504.4066 | <LOD | 130.8741 | <LOD | 46.40719 |
| <LOD | 7.439293 | <LOD | 80.80617 | 20682.92 | 217.9569 | <LOD | 99.7785 | <LOD | 44.11578 |
| <LOD | 7.323092 | <LOD | 81.23407 | 29546.12 | 293.7535 | <LOD | 105.7032 | <LOD | 44.75631 |
| <LOD | 7.630518 | <LOD | 81.68192 | 44394.75 | 427.4063 | <LOD | 123.3722 | <LOD | 45.34078 |
| <LOD | 7.049313 | <LOD | 83.36717 | 41263.68 | 406.2169 | <LOD | 121.125 | <LOD | 45.86686 |
| <LOD | 6.873397 | <LOD | 80.21687 | 28282.31 | 277.1021 | <LOD | 97.01447 | <LOD | 44.1084 |
| <LOD | 7.048941 | <LOD | 79.33606 | 14829.75 | 159.3034 | <LOD | 82.60019 | <LOD | 42.87262 |
| <LOD | 5.520222 | <LOD | 71.19073 | 351.1006 | 17.81719 | <LOD | 45.53587 | <LOD | 38.48932 |
| <LOD | 6.889068 | <LOD | 73.01381 | 5245.375 | 73.39906 | <LOD | 71.3297 | <LOD | 39.83457 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 70.41023 | <LOD | 52.59676 | <LOD | 66.77129 | <LOD | 2.033286 | <LOD | 27.90139 |
| <LOD | 70.14862 | <LOD | 53.9147 | <LOD | 69.14361 | <LOD | 1.547037 | <LOD | 28.43317 |
| <LOD | 71.62076 | <LOD | 55.4465 | <LOD | 121.1152 | <LOD | 6.450282 | <LOD | 44.31479 |
| <LOD | 80.21055 | 286.8967 | 22.37721 | <LOD | 201.6215 | 27.88494 | 5.796912 | <LOD | 86.01175 |
| <LOD | 74.19457 | <LOD | 57.09103 | <LOD | 125.3613 | <LOD | 12.00332 | 225.9607 | 24.88393 |
| <LOD | 80.30887 | <LOD | 62.42074 | <LOD | 186.9169 | <LOD | 16.5934 | 803.9055 | 42.15303 |
| <LOD | 73.23758 | <LOD | 56.05923 | <LOD | 119.0443 | <LOD | 10.3729 | 395.357 | 26.73122 |
| <LOD | 74.74603 | <LOD | 58.5665 | <LOD | 143.0089 | 24.9489 | 4.871424 | 289.1441 | 29.80007 |
| <LOD | 69.77938 | <LOD | 55.49786 | <LOD | 126.7378 | 14.72453 | 3.890892 | 275.3048 | 25.96658 |
| <LOD | 77.30676 | <LOD | 58.80884 | <LOD | 146.1222 | 27.31935 | 4.816278 | 160.5536 | 26.10996 |
| 120.502 | 27.0182 | <LOD | 62.9444 | <LOD | 184.3309 | 39.42322 | 5.97109 | 853.735 | 43.79108 |
| <LOD | 75.42294 | <LOD | 60.41438 | <LOD | 171.2075 | 32.04408 | 5.430414 | 628.8075 | 37.71378 |
| <LOD | 74.25914 | <LOD | 58.73578 | <LOD | 128.6661 | 13.66501 | 4.118524 | 255.7826 | 26.25066 |
| <LOD | 69.97868 | <LOD | 54.84873 | <LOD | 110.7669 | <LOD | 9.242713 | 236.3058 | 22.64481 |
| <LOD | 70.54259 | <LOD | 57.13069 | <LOD | 116.0224 | <LOD | 10.24379 | 421.6984 | 27.60927 |
| <LOD | 76.23577 | <LOD | 60.79617 | <LOD | 135.3238 | <LOD | 12.83947 | 282.8507 | 27.75516 |
| <LOD | 104.7866 | <LOD | 82.28947 | <LOD | 198.7205 | <LOD | 18.76262 | 820.7469 | 50.91808 |
| | | | | | | | | | |
| <LOD | 69.89459 | <LOD | 54.11576 | <LOD | 62.83459 | <LOD | 1.938761 | <LOD | 26.32552 |
| <LOD | 71.16422 | <LOD | 56.19697 | <LOD | 117.1808 | <LOD | 6.39221 | <LOD | 44.28809 |
| <LOD | 82.58704 | <LOD | 64.26949 | <LOD | 179.3057 | 26.3241 | 6.261617 | 561.9381 | 38.85036 |
| <LOD | 83.09967 | <LOD | 64.93713 | <LOD | 192.5055 | <LOD | 22.01637 | 1279.391 | 53.02702 |
| <LOD | 78.74097 | <LOD | 61.92384 | <LOD | 152.1459 | <LOD | 13.49705 | 697.7642 | 36.76188 |
| <LOD | 80.37802 | <LOD | 62.40017 | <LOD | 163.4911 | <LOD | 15.9371 | 620.7615 | 37.28199 |
| <LOD | 80.14353 | <LOD | 63.38445 | <LOD | 183.9086 | <LOD | 19.84747 | 458.2239 | 38.23996 |
| <LOD | 82.14001 | <LOD | 64.57436 | <LOD | 174.9165 | <LOD | 19.46991 | 514.6105 | 39.01722 |
| <LOD | 78.73024 | <LOD | 61.28793 | <LOD | 154.5321 | <LOD | 15.41491 | 515.8148 | 34.34066 |
| <LOD | 77.75864 | <LOD | 59.51962 | <LOD | 139.416 | <LOD | 10.71326 | 348.4681 | 27.29878 |
| | | | | | | | | | |
| <LOD | 69.15855 | <LOD | 54.04107 | <LOD | 61.24911 | <LOD | 2.184397 | <LOD | 25.32861 |
| <LOD | 71.64596 | <LOD | 56.43848 | <LOD | 124.6811 | <LOD | 6.404499 | <LOD | 40.36598 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| 21.26939 | 5.159139 | <LOD | 1.999689 | <LOD | 2.017668 | 6.405485 | 0.959995 | <LOD | 388.8174 |
| 20.62811 | 5.1751 | <LOD | 2.17644 | <LOD | 2.171584 | <LOD | 2.66509 | <LOD | 391.741 |
| 49.05517 | 6.23402 | 13.62879 | 1.051264 | <LOD | 2.683905 | 131.8537 | 2.505539 | 5518.189 | 320.4716 |
| 41.73069 | 6.665196 | 25.61757 | 1.450976 | 490.2745 | 7.938207 | 219.8791 | 3.735959 | 10920.27 | 514.8461 |
| 51.69854 | 5.945243 | 41.90953 | 1.49392 | <LOD | 2.333447 | 52.33436 | 1.705624 | 3461.102 | 303.4799 |
| 50.98364 | 6.447343 | 27.7473 | 1.504416 | <LOD | 4.702387 | 78.15852 | 2.217261 | 4996.192 | 425.4426 |
| 37.57358 | 5.816599 | 57.7553 | 1.681875 | <LOD | 2.19712 | 35.21101 | 1.470729 | 3482.111 | 292.2567 |
| 36.87564 | 6.098301 | 36.74006 | 1.606668 | <LOD | 5.127595 | 43.25247 | 1.713556 | 2944.804 | 325.2877 |
| 54.32352 | 5.79607 | 30.76614 | 1.329991 | <LOD | 3.065998 | 75.18961 | 1.935065 | 3327.167 | 299.1097 |
| 26.31621 | 6.223579 | 39.15973 | 1.508688 | <LOD | 2.514128 | 37.22484 | 1.572952 | 4637.055 | 354.1675 |
| 64.51081 | 6.584868 | 20.55191 | 1.473878 | <LOD | 5.875026 | 78.54134 | 2.266192 | 4305.586 | 414.8105 |
| 59.21256 | 6.370357 | 26.18424 | 1.464352 | <LOD | 4.838322 | 64.70216 | 2.017127 | 3483.081 | 380.4255 |
| 56.39717 | 6.190635 | 48.0928 | 1.629562 | <LOD | 2.543296 | 34.97392 | 1.536685 | 3871.109 | 317.3763 |
| 45.37139 | 5.739799 | 50.28622 | 1.55731 | <LOD | 1.90354 | 33.59472 | 1.423475 | 3007.073 | 270.5011 |
| 60.22877 | 6.054253 | 48.25789 | 1.594218 | <LOD | 2.224316 | 35.62105 | 1.510594 | 2649.111 | 277.0363 |
| 65.76701 | 6.502074 | 48.20073 | 1.685155 | <LOD | 2.471134 | 45.71592 | 1.733615 | 3709.086 | 328.8917 |
| 65.14232 | 8.869387 | 58.10332 | 2.430235 | <LOD | 3.270713 | 45.403 | 2.326443 | 5932.753 | 506.5109 |
| 45.13827 | 5.451006 | <LOD | 2.149447 | <LOD | 1.923414 | 8.523391 | 1.028079 | <LOD | 373.8757 |
| 52.26566 | 6.336905 | 15.75593 | 1.103219 | <LOD | 2.45636 | 120.1173 | 2.430597 | 4864.919 | 308.2902 |
| 37.81188 | 6.771011 | 83.72524 | 2.272102 | <LOD | 2.395144 | 57.00331 | 1.986537 | 6348.497 | 439.4317 |
| 47.47845 | 6.887455 | 87.60299 | 2.362617 | <LOD | 2.856349 | 44.36859 | 1.848053 | 6114.459 | 459.7446 |
| 44.88128 | 6.705445 | 55.19863 | 1.827427 | <LOD | 2.414355 | 54.10897 | 1.891335 | 7099.983 | 404.3228 |
| 40.8604 | 6.649698 | 73.89209 | 2.087361 | <LOD | 2.318023 | 56.51653 | 1.928305 | 5086.876 | 394.2573 |
| 39.05413 | 6.825544 | 78.5846 | 2.194232 | <LOD | 2.961264 | 51.07993 | 1.898864 | 6499.536 | 447.3466 |
| 47.01815 | 6.849426 | 82.8336 | 2.277869 | <LOD | 2.57001 | 48.01764 | 1.879624 | 6010.954 | 430.3459 |
| 46.46666 | 6.519694 | 70.52554 | 2.000547 | <LOD | 2.267299 | 53.85218 | 1.853069 | 5337.23 | 381.8608 |
| 55.29662 | 6.465513 | 47.18864 | 1.629492 | <LOD | 2.319387 | 59.76658 | 1.868202 | 5991.355 | 363.013 |
| 41.67963 | 5.42529 | 2.75344 | 0.748347 | <LOD | 1.781101 | 4.757771 | 0.96483 | <LOD | 369.2039 |
| 57.68224 | 6.341199 | 13.4981 | 1.064926 | <LOD | 2.783656 | 128.4504 | 2.515924 | 5147.956 | 322.8933 |

| Zr | Zr +/- |
|---|---|
| 25.26166 | 1.525195 |
| 9.489219 | 1.415369 |
| 438.0994 | 4.801602 |
| 267.0442 | 4.000811 |
| 124.1215 | 2.485947 |
| 75.67007 | 2.364549 |
| 142.9406 | 2.582053 |
| 108.4826 | 2.485253 |
| 94.71674 | 2.237005 |
| 263.1698 | 3.660502 |
| 59.53359 | 2.280477 |
| 82.8863 | 2.365595 |
| 142.6203 | 2.699846 |
| 129.1066 | 2.434623 |
| 124.0697 | 2.498792 |
| 177.72 | 3.083573 |
| 222.3378 | 4.627549 |
| | |
| 16.25594 | 1.513007 |
| 426.555 | 4.789675 |
| 220.5081 | 3.625621 |
| 186.5601 | 3.382461 |
| 273.7456 | 3.969185 |
| 243.503 | 3.725734 |
| 272.1477 | 4.043502 |
| 202.8481 | 3.496543 |
| 231.509 | 3.548503 |
| 301.0688 | 3.99557 |
| | |
| 20.25852 | 1.535947 |
| 402.7373 | 4.621603 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 |
|---|---|---|---|---|---|---|---|---|
| 29.63 | 30-Apr-09 | 7:47:33 | 1 | -0.0296 | | | | |
| 61.73 | 30-Apr-09 | 7:50:09 | 2 | | Ex-situ | Si Blank | | 0-1 ft |
| 62.23 | 30-Apr-09 | 7:52:59 | 3 | | Ex-situ | XRF 101 | | 0-1 ft |
| 61.77 | 30-Apr-09 | 7:55:34 | 4 | | Ex-situ | XRF 250 | | 0-1 ft |
| 60.87 | 30-Apr-09 | 7:58:27 | 5 | | Ex-situ | | NSP-FL-1A | 0-1 ft |
| 64.2 | 30-Apr-09 | 8:04:17 | 6 | | Ex-situ | | CA-12 OFF | 0-1 ft |
| 61.68 | 30-Apr-09 | 8:08:42 | 7 | | Ex-situ | | CA-15 OFF | 0-1 ft |
| 62.12 | 30-Apr-09 | 8:11:45 | 8 | | Ex-situ | | C-2 OFFSET | 0-1 ft |
| 62.02 | 30-Apr-09 | 8:14:18 | 9 | | Ex-situ | | CA-9 OFFSI | 0-1 ft |
| 63.9 | 30-Apr-09 | 8:16:50 | 10 | | Ex-situ | | CA-8 OFFSI | 0-1 ft |
| 58.68 | 30-Apr-09 | 8:19:36 | 11 | | Ex-situ | | CA-7 OFFSI | 0-1 ft |
| 61.5 | 30-Apr-09 | 8:22:10 | 12 | | Ex-situ | | CA-11 OFF | 0-1 ft |
| 58.28 | 30-Apr-09 | 8:24:39 | 13 | | Ex-situ | | CA-14 OFF | 0-1 ft |
| 62.91 | 30-Apr-09 | 8:27:29 | 14 | | Ex-situ | | NE-9 OFFSI | 0-1 ft |
| 69.6 | 30-Apr-09 | 8:30:27 | 15 | | Ex-situ | | NE-8 OFFSI | 0-1 ft |
| 61.17 | 30-Apr-09 | 8:33:47 | 16 | | Ex-situ | | CA-14 OFF | 0-1 ft |
| 62.34 | 30-Apr-09 | 8:40:32 | 17 | | Ex-situ | | CA-14 OFF | 0-1 ft |
| 31.36 | 30-Apr-09 | 8:44:33 | 18 | -0.028 | | | | |
| 63.4 | 30-Apr-09 | 8:46:05 | 19 | | Ex-situ | Si Blank | | 0-1 ft |
| 63.29 | 30-Apr-09 | 8:49:34 | 20 | | Ex-situ | XRF 250 | | 0-1 ft |

| Pb | Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.024251 | <LOD | 3.433181 | <LOD | 13.23609 | <LOD | 28.03848 | <LOD | 5.764287 |
| 91.15293 | 3.548554 | <LOD | 7.866278 | <LOD | 12.83535 | <LOD | 27.92419 | <LOD | 5.728445 |
| 255.8884 | 6.019532 | <LOD | 12.98335 | <LOD | 15.69611 | <LOD | 33.97001 | 13.62468 | 2.745076 |
| 524.3901 | 11.00954 | 427.7946 | 10.13787 | <LOD | 19.49559 | <LOD | 49.69074 | 15.26384 | 3.900967 |
| 99.77326 | 4.26098 | <LOD | 9.537336 | 20.64027 | 6.216739 | <LOD | 41.37304 | 162.7878 | 6.261987 |
| 226.6277 | 5.906579 | <LOD | 13.15553 | 101.7318 | 7.532643 | <LOD | 40.78059 | 407.6518 | 9.403459 |
| 154.3144 | 4.966864 | <LOD | 11.0879 | 78.19186 | 7.159289 | <LOD | 41.60044 | 336.817 | 8.552685 |
| 51.17491 | 2.921702 | <LOD | 6.41473 | 81.89227 | 6.457266 | <LOD | 29.93633 | 151.2382 | 5.472018 |
| 17.68368 | 2.281942 | <LOD | 4.629588 | <LOD | 13.867 | <LOD | 34.10572 | 24.89477 | 2.99373 |
| 30.96415 | 2.574073 | <LOD | 5.920598 | <LOD | 15.97203 | <LOD | 35.93657 | 68.48013 | 3.9913 |
| 56.27337 | 3.450488 | <LOD | 7.879557 | <LOD | 18.27305 | <LOD | 43.14792 | 55.5668 | 4.1136 |
| 4177.329 | 43.37381 | 197.372 | 20.06574 | 1373.606 | 24.80493 | 72.96297 | 20.40579 | 6642.335 | 67.88966 |
| 44.17924 | 3.115236 | <LOD | 7.053396 | <LOD | 16.68514 | <LOD | 41.4908 | 63.24651 | 4.195501 |
| 22.78839 | 3.002162 | <LOD | 6.766372 | <LOD | 18.42714 | <LOD | 47.04454 | 53.8265 | 4.497702 |
| 530.731 | 9.269479 | 28.20148 | 6.527898 | 285.5055 | 10.37997 | <LOD | 42.05219 | 1136.48 | 16.85764 |
| 330.2929 | 7.07611 | <LOD | 15.38205 | 202.279 | 9.035543 | <LOD | 39.7198 | 634.1173 | 11.85932 |
| | | | | | | | | | |
| <LOD | 4.509946 | <LOD | 3.179015 | <LOD | 13.22978 | <LOD | 27.04465 | <LOD | 5.513374 |
| 244.287 | 5.937971 | <LOD | 13.04612 | <LOD | 15.02395 | <LOD | 33.81856 | 12.94414 | 2.723697 |

| Hg | Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 5.441679 | <LOD | 76.64156 | 325.6603 | 16.53927 | <LOD | 57.11887 | <LOD | 37.31597 |
| <LOD | 6.172155 | <LOD | 75.67178 | <LOD | 27.78936 | <LOD | 68.33743 | 117.5246 | 12.77911 |
| <LOD | 7.849103 | <LOD | 77.10905 | 5865.54 | 74.81606 | <LOD | 77.24587 | <LOD | 38.55236 |
| 496.2778 | 12.30735 | <LOD | 87.20249 | 34949.95 | 325.7152 | 528.0434 | 51.46833 | 498.2491 | 16.31907 |
| <LOD | 7.465288 | <LOD | 87.92566 | 21530.71 | 209.2688 | <LOD | 96.50092 | <LOD | 42.80361 |
| <LOD | 7.301428 | <LOD | 81.62766 | 27516.24 | 246.8956 | <LOD | 100.7074 | <LOD | 40.04047 |
| <LOD | 7.370077 | <LOD | 81.71237 | 27184.33 | 245.1338 | <LOD | 91.57516 | <LOD | 40.53244 |
| <LOD | 6.392279 | <LOD | 77.73778 | 2854.708 | 47.02914 | 135.8219 | 27.46479 | <LOD | 38.16413 |
| <LOD | 6.330395 | <LOD | 78.10262 | 7044.414 | 84.81152 | <LOD | 68.12976 | <LOD | 38.70056 |
| <LOD | 6.696715 | <LOD | 77.75111 | 18176.9 | 164.3403 | <LOD | 80.29199 | <LOD | 37.88213 |
| <LOD | 7.884675 | <LOD | 86.10572 | 27210.37 | 249.6171 | <LOD | 99.78248 | <LOD | 41.74514 |
| <LOD | 19.09431 | 116.118 | 29.46827 | 41195.84 | 393.9024 | 435.5808 | 56.19218 | <LOD | 44.66536 |
| <LOD | 7.771366 | <LOD | 83.37763 | 24858.87 | 228.6632 | <LOD | 94.02056 | <LOD | 40.98215 |
| <LOD | 7.919821 | <LOD | 94.13277 | 30061.47 | 304.5709 | <LOD | 109.9671 | <LOD | 46.21451 |
| <LOD | 9.087629 | <LOD | 80.94833 | 28756.48 | 257.2729 | <LOD | 105.2046 | <LOD | 40.43913 |
| <LOD | 7.987972 | <LOD | 79.49443 | 23052.41 | 211.6081 | <LOD | 94.45328 | <LOD | 39.87005 |
| | | | | | | | | | |
| <LOD | 6.222065 | <LOD | 76.43642 | 304.1033 | 16.30728 | <LOD | 51.99181 | <LOD | 37.85626 |
| <LOD | 7.343964 | <LOD | 76.16952 | 5803.411 | 75.05019 | <LOD | 78.37625 | <LOD | 38.71036 |

| Sn | Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 71.80759 | <LOD | 51.8845 | <LOD | 72.93218 | <LOD | 2.104817 | <LOD | 30.46265 |
| <LOD | 71.21779 | <LOD | 52.99728 | <LOD | 75.80815 | <LOD | 1.520826 | <LOD | 29.19494 |
| <LOD | 72.98125 | <LOD | 54.14872 | <LOD | 123.5007 | <LOD | 6.529542 | <LOD | 44.27361 |
| <LOD | 83.66705 | 611.4603 | 22.75361 | <LOD | 194.7422 | 31.52102 | 5.689838 | <LOD | 84.26429 |
| <LOD | 82.35296 | <LOD | 59.12582 | <LOD | 142.4621 | 26.39552 | 4.381584 | 235.0056 | 26.39804 |
| <LOD | 77.12335 | <LOD | 56.53003 | <LOD | 139.6967 | 22.60186 | 4.696552 | 321.2456 | 28.42601 |
| <LOD | 76.61982 | <LOD | 56.61037 | <LOD | 139.743 | 19.35655 | 4.664354 | 222.7188 | 26.3922 |
| <LOD | 73.29143 | <LOD | 53.04096 | <LOD | 88.86982 | <LOD | 4.522925 | 66.88384 | 15.36087 |
| <LOD | 73.35423 | <LOD | 54.3905 | <LOD | 96.88652 | <LOD | 6.994883 | 51.5613 | 16.14261 |
| <LOD | 73.08879 | <LOD | 52.91575 | <LOD | 121.9231 | <LOD | 10.52645 | 298.9755 | 24.08699 |
| <LOD | 80.63071 | <LOD | 58.05003 | <LOD | 162.1765 | 19.12605 | 4.744991 | 289.6247 | 28.37631 |
| 393.1223 | 29.59003 | <LOD | 64.08946 | 311.8154 | 74.70361 | 42.75103 | 6.524135 | 929.0371 | 47.2061 |
| <LOD | 78.84024 | <LOD | 57.20957 | <LOD | 133.534 | 32.14631 | 4.575919 | 253.7617 | 26.64854 |
| <LOD | 88.75101 | <LOD | 64.72577 | <LOD | 156.7618 | 30.63904 | 5.612956 | 206.6577 | 30.37022 |
| <LOD | 76.95039 | <LOD | 56.69013 | <LOD | 145.5275 | 25.29532 | 4.832234 | 335.7575 | 29.28763 |
| <LOD | 75.25244 | <LOD | 55.98143 | <LOD | 139.1733 | 17.86633 | 4.273525 | 237.0775 | 25.76761 |
| | | | | | | | | | |
| <LOD | 72.09244 | <LOD | 52.46189 | <LOD | 71.68303 | <LOD | 2.011258 | <LOD | 30.32732 |
| <LOD | 72.33839 | <LOD | 54.45526 | <LOD | 120.9151 | <LOD | 6.32958 | <LOD | 41.16257 |

| Mo | Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- |
|---|---|---|---|---|---|---|---|---|---|
| <LOD | 14.99336 | <LOD | 1.995546 | <LOD | 1.980214 | 7.564544 | 0.955401 | <LOD | 431.7343 |
| 24.77426 | 5.028928 | <LOD | 2.019225 | <LOD | 2.198361 | <LOD | 2.631058 | <LOD | 437.0419 |
| 29.48032 | 5.974168 | 15.01082 | 1.042516 | <LOD | 2.771051 | 138.4505 | 2.480859 | 6031.026 | 324.763 |
| 40.65002 | 6.451651 | 24.02472 | 1.386079 | 524.1065 | 8.002587 | 240.4044 | 3.802005 | 9590.924 | 483.4379 |
| 21.12123 | 6.008282 | 46.051 | 1.583149 | <LOD | 2.623614 | 36.64708 | 1.539452 | 3982.607 | 337.6859 |
| 24.93925 | 5.708236 | 61.01666 | 1.723204 | <LOD | 2.731728 | 37.5099 | 1.496126 | 3976.859 | 329.4234 |
| 34.23452 | 5.849879 | 50.33871 | 1.58955 | <LOD | 2.894542 | 29.79745 | 1.399686 | 5240.27 | 346.7608 |
| 30.89473 | 5.284351 | 2.571323 | 0.732024 | <LOD | 2.082659 | 10.55238 | 1.027243 | <LOD | 565.1189 |
| 37.90593 | 5.413218 | 23.99798 | 1.154578 | <LOD | 1.981089 | 98.12688 | 2.093309 | 1104.809 | 216.1212 |
| 17.512 | 5.345462 | 23.27864 | 1.107742 | <LOD | 1.985872 | 23.20389 | 1.211483 | 3606.055 | 290.1388 |
| <LOD | 17.91373 | 92.72174 | 2.133119 | <LOD | 2.556942 | 76.11045 | 1.989025 | 6181.488 | 392.1918 |
| 37.49754 | 6.630274 | 21.65219 | 1.619638 | <LOD | 7.5621 | 108.7118 | 2.65659 | 6370.622 | 501.4651 |
| 23.96506 | 5.741069 | 52.85667 | 1.62435 | <LOD | 2.441963 | 43.66431 | 1.580644 | 2623.061 | 302.6664 |
| 32.11936 | 6.518268 | 57.05835 | 1.897258 | <LOD | 2.588865 | 51.12376 | 1.892783 | 2840.962 | 355.2495 |
| 24.76966 | 5.702076 | 52.93583 | 1.643941 | <LOD | 3.25034 | 44.65253 | 1.59966 | 3988.104 | 338.7191 |
| 33.66978 | 5.685407 | 49.85519 | 1.576067 | <LOD | 2.807866 | 52.3115 | 1.666624 | 3873.11 | 325.9565 |
| | | | | | | | | | |
| 28.11459 | 5.114356 | <LOD | 2.021584 | <LOD | 2.078295 | 5.61682 | 0.9365 | <LOD | 423.8825 |
| 35.02141 | 6.102521 | 15.00735 | 1.052756 | <LOD | 2.56241 | 136.955 | 2.492722 | 5936.643 | 321.7798 |

| Zr | Zr +/- |
|---|---|
| 24.37338 | 1.484405 |
| 4.753653 | 1.33773 |
| 476.7709 | 4.909206 |
| 286.96 | 4.031376 |
| 206.6469 | 3.162125 |
| 141.7297 | 2.558833 |
| 194.8543 | 2.962965 |
| 93.87196 | 2.02667 |
| 35.17334 | 1.73682 |
| 181.9129 | 2.662937 |
| 278.703 | 3.680111 |
| 146.9917 | 3.058993 |
| 138.5361 | 2.556065 |
| 107.9245 | 2.639587 |
| 116.7703 | 2.391401 |
| 121.7915 | 2.40393 |
| | |
| 16.7274 | 1.442412 |
| 506.331 | 5.17385 |

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 | Pb |
|---|---|---|---|---|---|---|---|---|---|
| 29.8 | 27-Jul-09 | 9:00:59 | 1 | -0.0104 | | | | | |
| 65.32 | 27-Jul-09 | 9:04:21 | 2 | | Ex-situ | Si Blank | | | <LOD |
| 66.82 | 27-Jul-09 | 9:09:24 | 3 | | Ex-situ | XRF 101 | | | 87.87714 |
| 67.88 | 27-Jul-09 | 9:13:33 | 4 | | Ex-situ | XRF 250 | | | 273.3268 |
| 66.75 | 27-Jul-09 | 9:17:15 | 5 | | Ex-situ | XRF 408 | | | 477.815 |
| 65.41 | 27-Jul-09 | 9:31:26 | 6 | | Ex-situ | | FLFA | SW-1 | 42.94336 |
| 68.16 | 27-Jul-09 | 9:35:27 | 7 | | Ex-situ | | FLFA | SW-2 | 37.21873 |
| 71.65 | 27-Jul-09 | 9:38:35 | 8 | | Ex-situ | | FLFA | SW-3 | 28.54737 |
| 72.4 | 27-Jul-09 | 9:41:20 | 9 | | Ex-situ | | FLFA | SW-4 | 11.99442 |
| 67.14 | 27-Jul-09 | 9:44:51 | 10 | | Ex-situ | | FLFA | SW-5 | 298.459 |
| 66.95 | 27-Jul-09 | 9:48:39 | 11 | | Ex-situ | | FLFA | SW-5 R2 | 384.3168 |
| 65.89 | 27-Jul-09 | 9:52:03 | 12 | | Ex-situ | | FLFA | SW-5 R3 | 389.4019 |
| 67.09 | 27-Jul-09 | 9:56:22 | 13 | | Ex-situ | | FLFA | SW-6 | 363.4886 |
| 67.7 | 27-Jul-09 | 10:00:31 | 14 | | Ex-situ | | FLFA | SW-7 | 88.97712 |
| 65.98 | 27-Jul-09 | 10:03:51 | 15 | | Ex-situ | | FLFA | SW-8 | 205.7305 |
| 69.4 | 27-Jul-09 | 10:06:29 | 16 | | Ex-situ | | FLFA | SW-9 | 27.86717 |
| 67.81 | 27-Jul-09 | 10:09:48 | 17 | | Ex-situ | | FLFA | SW-10 | 21.55526 |
| 75.39 | 27-Jul-09 | 10:12:46 | 18 | | Ex-situ | | FLFA | SW-11 | <LOD |
| 72.3 | 27-Jul-09 | 10:15:06 | 19 | | Ex-situ | | FLFA | SW-12 | 202.113 |
| 72.52 | 27-Jul-09 | 10:18:10 | 20 | | Ex-situ | | FLFA | SW-12 R2 | 197.1689 |
| 72.35 | 27-Jul-09 | 10:20:40 | 21 | | Ex-situ | | FLFA | SW-12 R3 | 211.0364 |
| 71.45 | 27-Jul-09 | 10:32:16 | 22 | | Ex-situ | | FLFA | SW-13 | <LOD |
| 73.07 | 27-Jul-09 | 10:35:50 | 23 | | Ex-situ | | FLFA | SW-14 | 49.43856 |
| 70.6 | 27-Jul-09 | 10:38:29 | 24 | | Ex-situ | | FLFA | SW-15 | 64.74812 |
| 76.29 | 27-Jul-09 | 10:41:09 | 25 | | Ex-situ | | FLFA | SW-16 | 142.8721 |
| 73.67 | 27-Jul-09 | 10:43:43 | 26 | | Ex-situ | | FLFA | SW-17 | 15.73737 |
| 75.14 | 27-Jul-09 | 10:48:13 | 27 | | Ex-situ | | FLFA | SW-18 | 68.67415 |
| 76.82 | 27-Jul-09 | 11:17:33 | 28 | | Ex-situ | | FLFA | SW-19 | 17.38974 |
| 75.94 | 27-Jul-09 | 11:20:10 | 29 | | Ex-situ | | FLFA | SW-20 | 152.9536 |
| 77.14 | 27-Jul-09 | 11:22:54 | 30 | | Ex-situ | | FLFA | SW-20 | 27.82535 |
| 78.28 | 27-Jul-09 | 11:26:17 | 31 | | Ex-situ | | FLFA | SW-21 | 41.51363 |
| 77.68 | 27-Jul-09 | 11:30:27 | 32 | | Ex-situ | | FLFA | SW-23 | 10.80862 |
| 78.64 | 27-Jul-09 | 11:33:42 | 33 | | Ex-situ | | FLFA | SW-24 | 18.13804 |
| 78.35 | 27-Jul-09 | 11:38:11 | 34 | | Ex-situ | | FLFA | SW-25 | <LOD |
| 76.95 | 27-Jul-09 | 11:41:57 | 35 | | Ex-situ | | FLFA | FL-1 | <LOD |
| 77.15 | 27-Jul-09 | 11:44:41 | 36 | | Ex-situ | | FLFA | FL-2 | <LOD |
| 75.28 | 27-Jul-09 | 12:46:28 | 37 | | Ex-situ | | FLFA | SW-26 | 7.748148 |
| 39.95 | 27-Jul-09 | 12:51:50 | 38 | -0.0099 | | | | | |
| 74.86 | 27-Jul-09 | 12:53:19 | 39 | | Ex-situ | Si Blank | | | <LOD |
| 73.85 | 27-Jul-09 | 12:55:56 | 40 | | Ex-situ | | ANC-SG- | | 227.2691 |
| 73.41 | 27-Jul-09 | 13:01:37 | 41 | | Ex-situ | | FLFA | FL-3 | 18.1285 |
| 74.03 | 27-Jul-09 | 13:06:11 | 42 | | Ex-situ | | FLFA | FL-4 | 9.044874 |
| 73.16 | 27-Jul-09 | 13:09:36 | 43 | | Ex-situ | | FLFA | FL-5 | 1540.514 |
| 76.92 | 27-Jul-09 | 13:12:46 | 44 | | Ex-situ | | FLFA | FL-6 | 185.5697 |
| 71.07 | 27-Jul-09 | 13:15:55 | 45 | | Ex-situ | | FLFA | FL-7 | 14447.74 |
| 75.61 | 27-Jul-09 | 13:19:54 | 46 | | Ex-situ | | FLFA | FL-8 | 122.2897 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 75.32 | 27-Jul-09 | 13:45:45 | 47 | | Ex-situ | FLFA | FL-10 | <LOD |
| 81.85 | 27-Jul-09 | 13:48:52 | 48 | | Ex-situ | FLFA | FL-9 | 45.58507 |
| 80.27 | 27-Jul-09 | 13:51:41 | 49 | | Ex-situ | FLFA | FL-11 | <LOD |
| 78.66 | 27-Jul-09 | 13:55:03 | 50 | | Ex-situ | FLFA | FL-12 | 319.1491 |
| 80.98 | 27-Jul-09 | 13:58:40 | 51 | | Ex-situ | FLFA | FL-13 | 19.25081 |
| 30.72 | 27-Jul-09 | 14:05:33 | 52 | -0.0088 | | | | |
| 64.26 | 27-Jul-09 | 14:06:58 | 53 | | Ex-situ | FLFA | FL-12 1-2 | 45.30993 |

| Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- | Hg |
|---|---|---|---|---|---|---|---|---|---|
| 4.722871 | <LOD | 3.138016 | <LOD | 12.63656 | <LOD | 27.7279 | <LOD | 5.680939 | <LOD |
| 3.615134 | <LOD | 8.033443 | <LOD | 12.18413 | <LOD | 27.56199 | <LOD | 5.521324 | <LOD |
| 6.502048 | <LOD | 13.981 | <LOD | 15.20497 | <LOD | 33.2297 | 18.50312 | 2.973917 | <LOD |
| 10.82931 | 436.4282 | 10.28534 | <LOD | 18.57515 | <LOD | 48.04416 | 16.37458 | 3.945256 | 445.2781 |
| 2.989245 | <LOD | 6.712543 | 26.71597 | 5.869348 | <LOD | 35.25031 | 111.8771 | 5.071209 | <LOD |
| 2.966377 | <LOD | 6.719975 | <LOD | 15.80349 | <LOD | 36.45281 | 67.06483 | 4.300677 | <LOD |
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| 7.911381 | 17.06657 | 5.686388 | 164.9795 | 8.698603 | <LOD | 38.29138 | 542.8548 | 11.23612 | <LOD |
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| 7.804907 | 30.12496 | 5.740541 | 438.7702 | 12.69431 | <LOD | 37.67631 | 1441.827 | 20.33651 | <LOD |
| 4.019134 | <LOD | 9.079912 | <LOD | 17.18989 | <LOD | 38.09233 | 84.27133 | 4.713687 | <LOD |
| 5.662974 | <LOD | 12.14375 | <LOD | 15.86173 | <LOD | 35.31237 | 84.76349 | 4.614284 | <LOD |
| 2.854092 | <LOD | 6.412902 | <LOD | 15.8539 | <LOD | 36.97466 | 82.07764 | 4.715531 | <LOD |
| 3.581338 | <LOD | 7.741325 | <LOD | 19.18508 | <LOD | 64.24239 | 69.64713 | 5.430135 | <LOD |
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| 5.849007 | <LOD | 11.93374 | <LOD | 14.09273 | <LOD | 33.31186 | 65.16878 | 4.321827 | <LOD |
| 5.736183 | <LOD | 11.68514 | <LOD | 13.62315 | <LOD | 31.71995 | 68.32591 | 4.361416 | <LOD |
| 5.985706 | <LOD | 12.07276 | <LOD | 14.84371 | <LOD | 33.79675 | 69.72552 | 4.453471 | <LOD |
| 6.271746 | 5.114821 | 1.602633 | <LOD | 13.17714 | <LOD | 31.00245 | 35.16911 | 3.395933 | <LOD |
| 3.677509 | <LOD | 8.233035 | <LOD | 17.7963 | <LOD | 41.59688 | 113.3824 | 5.879149 | <LOD |
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| 2.751493 | <LOD | 6.100635 | <LOD | 16.68081 | <LOD | 39.09372 | 116.7705 | 5.836159 | <LOD |
| 4.002825 | <LOD | 8.867043 | <LOD | 18.87001 | <LOD | 38.04894 | 152.8771 | 6.576769 | <LOD |
| 2.819644 | <LOD | 6.203434 | <LOD | 16.94341 | <LOD | 36.11246 | 75.50034 | 5.051225 | <LOD |
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| 5.400726 | <LOD | 3.598252 | <LOD | 12.83457 | <LOD | 23.93349 | <LOD | 5.556287 | <LOD |
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| 2.318729 | <LOD | 4.961594 | <LOD | 14.69449 | <LOD | 32.43941 | 46.5163 | 3.919233 | <LOD |
| 20.45537 | <LOD | 35.55086 | 58.24567 | 7.524228 | <LOD | 38.54233 | 176.5724 | 7.112086 | <LOD |
| 6.603206 | <LOD | 14.71631 | <LOD | 17.94323 | <LOD | 41.58696 | 88.79607 | 5.715263 | <LOD |
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| 5.106837 | <LOD | 11.36971 | <LOD | 17.75603 | <LOD | 38.42046 | 95.82211 | 5.491751 | <LOD |

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| 6.275286 | <LOD | 4.437277 | <LOD | 15.944 | <LOD | 36.09424 | 69.60991 | 4.649863 | <LOD |
| 4.4604 | <LOD | 9.770424 | <LOD | 20.52269 | <LOD | 46.41201 | 120.9091 | 7.498346 | <LOD |
| 7.703527 | <LOD | 5.384096 | <LOD | 17.16361 | <LOD | 40.50346 | 50.0078 | 4.749853 | <LOD |
| 8.454823 | <LOD | 18.3929 | 38.02762 | 7.385427 | <LOD | 36.52435 | 247.854 | 8.815321 | <LOD |
| 3.115213 | <LOD | 6.853002 | <LOD | 17.438 | <LOD | 34.49206 | 63.69549 | 5.167588 | <LOD |
| | | | | | | | | | |
| 3.018907 | <LOD | 6.698526 | 19.26412 | 5.719267 | <LOD | 36.47192 | 111.7415 | 5.030684 | <LOD |

| Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- | Sn |
|---|---|---|---|---|---|---|---|---|---|
| 6.247222 | <LOD | 74.27817 | 374.7906 | 17.54818 | <LOD | 54.48904 | <LOD | 37.41349 | <LOD |
| 6.862088 | <LOD | 73.34679 | <LOD | 26.56181 | <LOD | 64.74583 | 86.30911 | 12.91818 | <LOD |
| 7.601547 | <LOD | 71.48057 | 6182.482 | 80.99941 | <LOD | 79.52081 | <LOD | 38.68741 | <LOD |
| 11.98124 | 131.4367 | 28.27223 | 34685.65 | 333.9141 | 532.3911 | 52.59554 | 392.7477 | 16.10984 | <LOD |
| 6.889328 | <LOD | 77.98184 | 16070.11 | 157.7859 | <LOD | 77.77458 | <LOD | 39.83709 | <LOD |
| 6.73051 | <LOD | 79.7251 | 15603.86 | 160.3398 | <LOD | 80.22305 | <LOD | 41.02078 | <LOD |
| 7.797099 | <LOD | 89.0126 | 24748.88 | 258.9132 | <LOD | 99.38101 | <LOD | 45.81809 | <LOD |
| 7.328088 | <LOD | 89.61876 | 30218.06 | 316.4111 | <LOD | 108.2319 | <LOD | 46.88815 | <LOD |
| 8.049257 | <LOD | 76.78424 | 19160.38 | 186.2596 | <LOD | 87.93524 | <LOD | 40.46936 | <LOD |
| 7.75141 | <LOD | 76.7232 | 18107.96 | 180.0792 | <LOD | 86.00624 | <LOD | 41.02981 | <LOD |
| 8.185512 | <LOD | 75.28857 | 18466.7 | 179.1375 | <LOD | 88.94338 | <LOD | 39.85658 | <LOD |
| 8.03891 | <LOD | 78.79668 | 17678.13 | 179.4954 | <LOD | 88.26932 | <LOD | 41.64265 | <LOD |
| 6.568558 | <LOD | 77.40955 | 22467.4 | 214.5866 | <LOD | 85.72293 | <LOD | 40.83308 | <LOD |
| 6.773187 | <LOD | 75.61386 | 19158.8 | 184.5994 | <LOD | 87.84988 | <LOD | 40.092 | <LOD |
| 6.851658 | <LOD | 75.54157 | 22563.87 | 218.9478 | <LOD | 85.25323 | <LOD | 41.38411 | <LOD |
| 8.344845 | <LOD | 84.83469 | 119500.2 | 1153.627 | 311.4111 | 71.42014 | <LOD | 48.11173 | <LOD |
| 7.061155 | <LOD | 78.92461 | 24458.97 | 263.7649 | <LOD | 105.0497 | <LOD | 45.64114 | <LOD |
| 6.91672 | <LOD | 68.62916 | 15030.14 | 159.9176 | <LOD | 78.58735 | <LOD | 40.65201 | <LOD |
| 7.21903 | <LOD | 67.36208 | 14693.87 | 156.116 | <LOD | 76.70625 | <LOD | 40.06017 | <LOD |
| 7.252912 | 70.19784 | 23.15258 | 15057.23 | 160.5848 | <LOD | 75.67641 | <LOD | 40.81985 | <LOD |
| 6.52334 | <LOD | 67.37255 | 14390.71 | 148.4351 | <LOD | 73.14921 | <LOD | 39.20775 | <LOD |
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| 6.0407 | <LOD | 65.35538 | 13354.57 | 138.6877 | <LOD | 75.54253 | <LOD | 38.57488 | <LOD |
| 7.812131 | <LOD | 77.57145 | 20174.57 | 227.6541 | <LOD | 94.07434 | <LOD | 46.09903 | <LOD |
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| 5.794112 | <LOD | 63.02805 | 9369.267 | 121.1017 | <LOD | 76.81484 | <LOD | 43.01107 | <LOD |
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| 5.280851 | <LOD | 64.04376 | 249.4769 | 16.64422 | <LOD | 51.50367 | <LOD | 39.47179 | <LOD |
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| 6.848461 | <LOD | 67.00082 | 12414.28 | 140.9968 | <LOD | 69.88525 | <LOD | 41.18815 | <LOD |
| 10.13404 | <LOD | 69.54501 | 17900.5 | 197.4036 | <LOD | 84.69786 | <LOD | 43.30196 | <LOD |
| 7.288866 | <LOD | 67.1122 | 26672.84 | 299.0774 | <LOD | 105.7521 | <LOD | 46.60537 | <LOD |
| 30.41695 | <LOD | 73.5174 | 21489.91 | 288.4996 | <LOD | 144.9925 | <LOD | 52.52759 | <LOD |
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|---|---|---|---|---|---|---|---|
| 6.360269 | <LOD | 55.92454 | 24116.62 | 245.4126 | <LOD | 95.32602 | <LOD | 41.30482 | <LOD |
| 8.787355 | <LOD | 57.29739 | 24705.15 | 328.9284 | <LOD | 123.3522 | <LOD | 53.32866 | <LOD |
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| | | | | | | | | | |
| 6.863306 | <LOD | 78.56892 | 14712.78 | 146.3044 | <LOD | 84.37119 | <LOD | 39.87576 | <LOD |

| Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- | Mo |
|---|---|---|---|---|---|---|---|---|---|
| 70.46355 | <LOD | 52.10801 | <LOD | 70.32727 | <LOD | 2.14805 | <LOD | 30.90036 | 25.75828 |
| 70.19498 | <LOD | 54.28003 | <LOD | 67.52148 | <LOD | 1.68066 | <LOD | 29.55381 | 35.62037 |
| 69.67587 | <LOD | 55.6962 | <LOD | 126.8159 | <LOD | 6.811044 | <LOD | 41.79788 | 50.67559 |
| 82.0752 | 359.3821 | 22.52921 | <LOD | 197.4803 | 25.71393 | 5.79886 | <LOD | 84.6908 | 44.16091 |
| 73.80453 | <LOD | 55.44403 | <LOD | 112.9073 | 15.96616 | 3.592355 | 194.3596 | 22.65155 | 32.75247 |
| 75.88181 | <LOD | 57.55901 | <LOD | 117.5097 | 18.71363 | 3.702113 | 134.8161 | 22.02196 | 31.14261 |
| 85.29774 | <LOD | 64.10455 | <LOD | 135.9726 | <LOD | 15.01052 | 89.58075 | 26.04486 | 49.77897 |
| 85.85958 | <LOD | 66.10645 | <LOD | 155.7834 | 18.06734 | 5.720513 | 138.2736 | 29.63438 | 55.02332 |
| 74.52144 | <LOD | 56.67832 | <LOD | 120.1811 | 22.28946 | 4.040999 | 154.7904 | 23.4163 | 33.41855 |
| 75.17156 | <LOD | 57.47448 | <LOD | 124.175 | 13.01168 | 3.917623 | 119.9506 | 22.62944 | 49.69877 |
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| 76.30425 | <LOD | 58.1411 | <LOD | 135.5382 | <LOD | 11.78876 | 337.4201 | 27.68436 | 47.93506 |
| 74.5768 | <LOD | 57.33444 | <LOD | 140.3818 | <LOD | 12.82828 | 341.0685 | 28.05386 | 47.39714 |
| 73.07024 | <LOD | 56.3135 | <LOD | 135.1743 | 23.19747 | 4.011714 | 219.0306 | 24.57646 | 39.28214 |
| 74.02321 | <LOD | 58.05046 | <LOD | 136.2861 | 23.3572 | 4.475374 | 191.2683 | 25.41888 | 56.56685 |
| 84.53707 | <LOD | 68.1256 | <LOD | 279.2686 | 43.30096 | 11.65308 | 243.7868 | 52.67174 | 42.12759 |
| 79.74248 | <LOD | 65.23272 | <LOD | 135.3057 | 16.74124 | 5.150053 | 416.1895 | 33.93433 | 67.66268 |
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| 69.40533 | <LOD | 57.67896 | <LOD | 116.8131 | 17.45824 | 3.6612 | 85.73774 | 20.76329 | 66.66583 |
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| 66.68821 | <LOD | 55.13582 | <LOD | 103.2897 | <LOD | 9.8832 | 76.83389 | 19.29387 | 69.31707 |
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| 83.48572 | <LOD | 78.12373 | <LOD | 206.4738 | <LOD | 17.76263 | 357.595 | 42.53701 | 49.84124 |
| 69.25404 | <LOD | 63.01453 | <LOD | 145.4281 | 19.78487 | 5.18598 | 175.7741 | 28.40358 | 73.45046 |

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|---|---|---|---|---|---|---|---|---|---|
| 64.73673 | <LOD | 60.6617 | <LOD | 132.4026 | 15.55639 | 4.818332 | <LOD | 68.14217 | 81.11591 |
| 76.68896 | <LOD | 80.02889 | <LOD | 176.0548 | <LOD | 18.71211 | 221.4324 | 36.26423 | 123.3965 |
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| 59.62297 | <LOD | 70.05942 | <LOD | 137.4127 | <LOD | 13.03706 | 232.9275 | 29.38164 | 114.1579 |
| | | | | | | | | | |
| 74.39876 | <LOD | 55.23469 | <LOD | 128.4537 | 14.1586 | 3.416119 | 295.7468 | 24.51488 | 27.32072 |

| Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- | Zr |
|---|---|---|---|---|---|---|---|---|---|
| 5.086035 | <LOD | 2.009056 | <LOD | 1.997649 | 6.706466 | 0.950515 | <LOD | 420.4175 | 16.69311 |
| 5.272779 | <LOD | 2.135205 | <LOD | 2.295326 | <LOD | 2.751405 | <LOD | 395.3971 | 9.405654 |
| 6.398993 | 14.84445 | 1.089533 | <LOD | 2.798623 | 142.3071 | 2.633439 | 6134.92 | 337.5415 | 504.3481 |
| 6.642711 | 26.88693 | 1.466338 | 505.866 | 8.056396 | 235.5429 | 3.866223 | 11241.6 | 512.041 | 263.2617 |
| 5.620435 | 44.86738 | 1.484558 | <LOD | 2.454591 | 46.54289 | 1.580459 | 1477.008 | 250.6512 | 104.3088 |
| 5.831695 | 55.23656 | 1.680775 | <LOD | 2.25981 | 35.34845 | 1.499476 | 1801.511 | 265.8328 | 99.31785 |
| 6.589984 | 43.67383 | 1.694516 | <LOD | 2.435265 | 29.16062 | 1.578651 | 2889.001 | 324.4336 | 84.61015 |
| 6.889087 | 47.5906 | 1.812137 | <LOD | 2.487983 | 39.06915 | 1.781521 | 3464.675 | 367.6181 | 113.6232 |
| 5.814689 | 40.81062 | 1.486197 | <LOD | 2.962164 | 74.20091 | 1.952689 | 3132.104 | 289.8633 | 120.987 |
| 6.009798 | 42.15146 | 1.527977 | <LOD | 2.879141 | 82.76273 | 2.07167 | 3243.909 | 298.6353 | 149.2746 |
| 5.919302 | 43.83511 | 1.522642 | <LOD | 2.655024 | 98.32453 | 2.19402 | 3233.137 | 301.9124 | 184.0719 |
| 6.200179 | 43.69042 | 1.576947 | <LOD | 2.971342 | 117.0748 | 2.470201 | 4546.225 | 335.68 | 214.0282 |
| 6.074026 | 46.6953 | 1.575145 | <LOD | 2.36069 | 53.28833 | 1.731508 | 4668.766 | 342.8282 | 200.4144 |
| 6.034442 | 48.6314 | 1.575161 | <LOD | 2.655972 | 36.06688 | 1.489228 | 4487.544 | 329.1352 | 288.911 |
| 6.263409 | 63.04735 | 1.814872 | <LOD | 2.484634 | 35.05769 | 1.527786 | 5380.263 | 349.0746 | 226.4255 |
| 7.237047 | 35.41229 | 1.707761 | <LOD | 2.934155 | 23.63454 | 1.628352 | 12985.28 | 680.5233 | 179.9729 |
| 6.929951 | 51.11892 | 1.854997 | <LOD | 2.395286 | 35.07454 | 1.713079 | 1929.936 | 308.1607 | 109.3284 |
| 6.309742 | 32.87586 | 1.41283 | <LOD | 2.675233 | 37.57355 | 1.573873 | 3443.571 | 290.3313 | 163.8005 |
| 6.240868 | 34.73187 | 1.431139 | <LOD | 2.42181 | 34.83165 | 1.52715 | 3404.457 | 292.0402 | 162.6583 |
| 6.38692 | 37.43793 | 1.48718 | <LOD | 2.534016 | 38.81498 | 1.595985 | 3383.277 | 294.0096 | 165.1776 |
| 5.955483 | 26.18952 | 1.241815 | <LOD | 2.207605 | 46.03557 | 1.610964 | 3812.118 | 281.6705 | 153.6392 |
| 6.684281 | 63.1564 | 1.990377 | <LOD | 2.555056 | 38.54199 | 1.725942 | 2726.996 | 350.4347 | 92.4669 |
| 5.895201 | 46.49679 | 1.523514 | <LOD | 2.541997 | 40.3666 | 1.523753 | 2734.829 | 256.6651 | 110.5793 |
| 6.997656 | 44.84008 | 1.783618 | <LOD | 2.77384 | 35.84166 | 1.747241 | 2746.415 | 331.7357 | 102.2604 |
| 6.760447 | 51.00464 | 1.785258 | <LOD | 2.602854 | 28.80784 | 1.559857 | 4890.33 | 369.274 | 230.6114 |
| 6.818997 | 39.79544 | 1.621325 | <LOD | 2.402533 | 36.6098 | 1.675523 | 3311.568 | 342.8319 | 179.5092 |
| 6.951152 | 50.35539 | 1.829518 | <LOD | 2.306942 | 31.84759 | 1.652759 | 2727.012 | 322.989 | 121.7204 |
| 6.657912 | 40.54965 | 1.623351 | <LOD | 2.838789 | 33.06878 | 1.613274 | 2862.086 | 284.618 | 122.3765 |
| 7.030904 | 49.50176 | 1.850153 | <LOD | 2.486973 | 30.96128 | 1.670681 | 3101.257 | 324.2626 | 132.2858 |
| 7.367481 | 45.10282 | 1.802425 | <LOD | 2.479283 | 33.33349 | 1.729231 | 2907.041 | 323.0867 | 150.9885 |
| 7.207786 | 60.13987 | 1.986465 | <LOD | 2.240943 | 41.21228 | 1.803052 | 3813.939 | 334.3112 | 154.9525 |
| 7.303496 | 50.40496 | 1.880025 | <LOD | 2.467554 | 38.0663 | 1.796171 | 3185.995 | 312.9984 | 148.4117 |
| 7.076206 | 57.21103 | 1.969887 | <LOD | 2.289973 | 31.97341 | 1.689463 | 2565.747 | 303.7926 | 127.3285 |
| 6.725979 | 50.90398 | 1.781816 | <LOD | 2.083323 | 35.02117 | 1.6479 | 2652.861 | 285.9235 | 154.9859 |
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| 6.673115 | 53.17394 | 1.795842 | <LOD | 2.101499 | 31.95554 | 1.585825 | 2874.682 | 284.6158 | 151.8202 |
| | | | | | | | | | |
| 5.835561 | <LOD | 2.320016 | <LOD | 2.095506 | 8.341874 | 1.083651 | <LOD | 333.1851 | 23.21647 |
| 6.826681 | 15.03634 | 1.156682 | <LOD | 2.530191 | 125.2077 | 2.635428 | 5734.829 | 339.1286 | 408.2686 |
| 6.357412 | 70.59029 | 1.990565 | <LOD | 2.238024 | 25.1031 | 1.449052 | 2318.074 | 298.2007 | 82.4441 |
| 6.386065 | 46.38454 | 1.628037 | <LOD | 2.139167 | 34.27844 | 1.552336 | 2924.567 | 289.5188 | 134.5231 |
| 6.779865 | 41.31504 | 1.755754 | <LOD | 4.433448 | 213.9541 | 3.715281 | 2878.49 | 321.0751 | 164.4845 |
| 7.521328 | 47.01927 | 1.903265 | <LOD | 2.90366 | 67.81481 | 2.291895 | 4282.896 | 392.7975 | 186.2831 |
| 8.748291 | 22.28498 | 2.744407 | <LOD | 14.56985 | 63.46029 | 2.997894 | 4628.87 | 488.6652 | 146.2997 |
| 6.960268 | 57.00074 | 1.913985 | <LOD | 2.591551 | 54.32363 | 1.954711 | 4202.214 | 358.5891 | 192.3374 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.566157 | 51.07432 | 1.744871 | <LOD | 2.025343 | 25.32764 | 1.46773 | 2583.519 | 308.0116 | 88.49358 |
| 9.040798 | 49.35936 | 2.242961 | <LOD | 3.096204 | 36.35273 | 2.141236 | 3744.239 | 429.2918 | 127.169 |
| 7.760813 | 51.37096 | 2.01452 | <LOD | 2.391292 | 37.91952 | 1.909701 | 2294.865 | 341.069 | 135.678 |
| 7.545028 | 40.08813 | 1.767641 | <LOD | 2.959728 | 117.0655 | 2.875693 | 2735.441 | 324.4161 | 165.3169 |
| 7.931755 | 39.44407 | 1.821928 | <LOD | 2.30293 | 42.30054 | 1.991339 | 2539.246 | 329.821 | 112.0475 |
| | | | | | | | | | |
| 5.615417 | 58.69623 | 1.651543 | <LOD | 2.297219 | 41.39085 | 1.509297 | 2439.512 | 287.8087 | 148.1645 |

| Zr +/- |
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| 1.438361 |
| 1.423055 |
| 5.350352 |
| 3.961379 |
| 2.251063 |
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| 3.688426 |
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| 3.496471 |
| 2.714657 |
| 2.873379 |
| 2.84353 |
| 2.893482 |
| 2.68309 |
| 2.507616 |
| 2.324067 |
| 2.684763 |
| 3.637801 |
| 3.21963 |
| 2.803244 |
| 2.711439 |
| 2.949516 |
| 3.158231 |
| 3.122504 |
| 3.130137 |
| 2.913059 |
| 3.006038 |
| 3.024301 |
| 2.942179 |
| |
| 1.655243 |
| 4.950882 |
| 2.291703 |
| 2.683506 |
| 3.243613 |
| 3.609021 |
| 4.032316 |
| 3.396021 |

2.372747
3.546597
3.20961
3.395981
3.0095

2.556445

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 | Pb |
|---|---|---|---|---|---|---|---|---|---|
| 39.97 | 28-Jul-09 | 7:16:32 | 1 | -0.0093 | | | | | |
| 75.57 | 28-Jul-09 | 7:18:21 | 2 | | Ex-situ | Si Blank | | | <LOD |
| 74.12 | 28-Jul-09 | 7:21:15 | 3 | | Ex-situ | XRF 101 | | | 82.32416 |
| 76.1 | 28-Jul-09 | 7:24:55 | 4 | | Ex-situ | XRF 250 | | | 220.3602 |
| 76.87 | 28-Jul-09 | 7:27:46 | 5 | | Ex-situ | XRF 408 | | | 437.2444 |
| 76.26 | 28-Jul-09 | 7:35:25 | 6 | | Ex-situ | XRF 408 | | | 449.7989 |
| 72.97 | 28-Jul-09 | 7:41:23 | 7 | | Ex-situ | | FLFA | FL-7 R2 | 8727.092 |
| 76.34 | 28-Jul-09 | 7:44:14 | 8 | | Ex-situ | | FLFA | FL-7 R3 | 4486.428 |
| 77.31 | 28-Jul-09 | 7:47:20 | 9 | | Ex-situ | | FLFA | FL-14 | 16.33112 |
| 77.22 | 28-Jul-09 | 7:50:43 | 10 | | Ex-situ | | FLFA | FL-15 | 20.83134 |
| 76.28 | 28-Jul-09 | 7:53:39 | 11 | | Ex-situ | | FLFA | FL-16 | 33.70415 |
| 75.96 | 28-Jul-09 | 7:56:17 | 12 | | Ex-situ | | FLFA | FL-17 | 53.87212 |
| 66.99 | 28-Jul-09 | 7:59:05 | 13 | | Ex-situ | | FLFA | FL-18 | 1071.48 |
| 75.83 | 28-Jul-09 | 8:01:27 | 14 | | Ex-situ | | FLFA | FL-18 R3 | 548.4497 |
| 75.89 | 28-Jul-09 | 8:04:37 | 15 | | Ex-situ | | FLFA | FL-19 | 88.25008 |
| 76.04 | 28-Jul-09 | 8:07:30 | 16 | | Ex-situ | | FLFA | SW-30 | 328.3126 |
| 77.3 | 28-Jul-09 | 8:10:38 | 17 | | Ex-situ | | FLFA | SW-30 R2 | 375.0773 |
| 79.48 | 28-Jul-09 | 8:15:55 | 18 | | Ex-situ | | FLFA | SW-27 | 831.0674 |
| 77.26 | 28-Jul-09 | 8:19:03 | 19 | | Ex-situ | | FLFA | FL-5 1-2 | 24.98034 |
| 76.76 | 28-Jul-09 | 8:22:00 | 20 | | Ex-situ | | FLFA | FL-7 1-2 | 2915.645 |
| 79.43 | 28-Jul-09 | 8:28:25 | 21 | | Ex-situ | | FLFA | SW-5 1-2 | 20.98669 |
| 79.13 | 28-Jul-09 | 8:31:56 | 22 | | Ex-situ | | FLFA | FL-7 1-2 R2 | 5274.816 |
| 77.37 | 28-Jul-09 | 8:46:13 | 23 | | Ex-situ | | FLFA | SW-28 | 760.7582 |
| 77.59 | 28-Jul-09 | 8:48:34 | 24 | | Ex-situ | | FLFA | SW-29 | 139.5483 |
| 79.2 | 28-Jul-09 | 8:55:03 | 25 | | Ex-situ | | FLFA | SW-6 1-2 | 56.23417 |
| 78.08 | 28-Jul-09 | 9:19:56 | 26 | | Ex-situ | | FLFA | SW-27 1-2 | 10.08133 |
| 81.07 | 28-Jul-09 | 9:22:51 | 27 | | Ex-situ | | FLFA | SW-28 1-2 | <LOD |
| 79.03 | 28-Jul-09 | 9:46:37 | 28 | | Ex-situ | | FLFA | FL-18 1-2 | <LOD |
| 78.71 | 28-Jul-09 | 9:50:12 | 29 | | Ex-situ | | FLFA | SW-30 1-2 | 20.62074 |
| 83.77 | 28-Jul-09 | 10:14:23 | 30 | | Ex-situ | | FLFA | FL-7 2-3 | <LOD |
| 46.04 | 28-Jul-09 | 10:18:35 | 31 | -0.0117 | | | | | |
| 79.41 | 28-Jul-09 | 10:22:01 | 32 | | Ex-situ | Si Blank | | | <LOD |
| 78.51 | 28-Jul-09 | 10:25:34 | 33 | | Ex-situ | XRF 250 | | | 204.7349 |
| 83.95 | 28-Jul-09 | 14:32:41 | 34 | | Ex-situ | | FLFA | SW-31 | 28.14854 |
| 40.18 | 28-Jul-09 | 15:05:00 | 35 | -0.0291 | | | | | |
| 82.89 | 28-Jul-09 | 15:06:42 | 36 | | Ex-situ | | FLFA | SW-32 | <LOD |
| 78.47 | 28-Jul-09 | 15:09:25 | 37 | | Ex-situ | | FLFA | SW-33 | 41.1018 |
| 40.09 | 28-Jul-09 | 15:12:04 | 38 | -0.0268 | | | | | |
| 75 | 28-Jul-09 | 15:13:31 | 39 | | Ex-situ | Si Blank | FLFA | | <LOD |
| 74.4 | 28-Jul-09 | 15:16:07 | 40 | | Ex-situ | XRF 250 | | | 229.7381 |

| Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- | Hg |
|---|---|---|---|---|---|---|---|---|---|
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| 11.72687 | 381.01 | 11.01677 | <LOD | 19.2419 | <LOD | 47.13257 | <LOD | 12.51818 | 409.2953 |
| 11.85945 | 396.9965 | 11.17492 | <LOD | 19.21003 | <LOD | 49.0116 | 15.23688 | 4.263036 | 384.0519 |
| 100.0306 | 120.5162 | 34.07667 | 146.2276 | 11.78072 | <LOD | 51.12882 | 1203.334 | 23.68057 | <LOD |
| 55.76091 | <LOD | 71.52779 | 36.63122 | 8.808254 | <LOD | 47.22659 | 271.8719 | 10.40471 | <LOD |
| 2.709664 | <LOD | 5.626741 | <LOD | 16.25378 | <LOD | 32.54905 | 40.23337 | 4.002604 | <LOD |
| 2.902099 | <LOD | 6.016012 | <LOD | 16.59529 | <LOD | 34.57455 | 94.15755 | 5.446252 | <LOD |
| 3.327317 | <LOD | 7.505028 | <LOD | 18.71077 | <LOD | 40.88853 | 192.8009 | 7.531655 | <LOD |
| 3.722687 | <LOD | 7.685507 | <LOD | 17.81641 | <LOD | 38.08912 | 95.15792 | 5.462927 | <LOD |
| 17.04553 | <LOD | 31.20474 | 267.0029 | 11.94955 | <LOD | 36.97679 | 1373.208 | 22.77358 | <LOD |
| 10.80868 | <LOD | 21.94182 | 177.2702 | 9.940164 | <LOD | 39.45473 | 972.0106 | 17.54271 | <LOD |
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| 16.90067 | 39.16455 | 11.19645 | 642.8694 | 20.41074 | <LOD | 51.4341 | 2266.988 | 37.26429 | <LOD |
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| 36.79017 | 67.13341 | 18.51568 | 88.06057 | 9.171686 | <LOD | 40.53032 | 311.6261 | 10.40337 | <LOD |
| 3.005097 | <LOD | 6.516405 | <LOD | 16.97117 | <LOD | 34.58749 | 63.11382 | 4.88883 | <LOD |
| 74.95535 | <LOD | 91.47424 | 1319.836 | 33.45612 | <LOD | 63.43092 | 724.5613 | 20.87089 | <LOD |
| 13.72634 | <LOD | 26.90604 | 201.1336 | 10.82189 | <LOD | 40.18962 | 905.1306 | 17.58485 | <LOD |
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| 3.266217 | <LOD | 7.409238 | <LOD | 18.81858 | <LOD | 42.4801 | 100.4163 | 6.153299 | <LOD |
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| 6.535683 | <LOD | 14.25262 | <LOD | 16.17847 | <LOD | 33.13232 | <LOD | 8.537871 | <LOD |
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| 5.435608 | <LOD | 3.520172 | <LOD | 11.7019 | <LOD | 24.60755 | <LOD | 5.613234 | <LOD |
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| Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- | Sn |
|---|---|---|---|---|---|---|---|---|---|
| 5.925142 | <LOD | 62.60618 | 263.9968 | 17.21067 | <LOD | 45.94101 | <LOD | 39.83699 | <LOD |
| 7.005493 | <LOD | 64.47585 | <LOD | 28.88475 | <LOD | 64.20244 | 55.86711 | 13.31357 | <LOD |
| 7.35012 | 62.6555 | 19.76258 | 5133.504 | 79.25954 | <LOD | 74.72144 | <LOD | 41.44501 | <LOD |
| 13.08538 | 118.1938 | 20.62276 | 31419.73 | 353.7286 | 561.9916 | 59.1362 | 132.8374 | 16.23856 | <LOD |
| 12.62341 | 73.7433 | 20.63642 | 31054.92 | 348.2534 | 472.7061 | 56.59979 | 153.968 | 16.15262 | <LOD |
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| 8.352955 | <LOD | 53.34994 | 21831.26 | 244.7156 | <LOD | 100.9059 | <LOD | 43.52805 | <LOD |
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| 7.856977 | <LOD | 65.36946 | 5404.115 | 79.97401 | <LOD | 77.13656 | <LOD | 41.13657 | <LOD |

| Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- | Mo |
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| 66.74796 | <LOD | 57.29875 | <LOD | 61.37511 | <LOD | 2.004186 | <LOD | 26.12451 | 70.95571 |
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| 69.23975 | <LOD | 63.02628 | <LOD | 135.2025 | 22.11802 | 5.165274 | 264.8519 | 30.07347 | 75.77881 |
| 70.43633 | <LOD | 65.98609 | <LOD | 143.1269 | <LOD | 12.79639 | 374.9246 | 32.22716 | 100.0275 |
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| | | | | | | | | | |
| 96.84483 | <LOD | 86.08666 | <LOD | 162.0244 | <LOD | 15.60459 | 255.9408 | 35.96026 | 105.1204 |
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| | | | | | | | | | |
| 66.65667 | <LOD | 56.33401 | <LOD | 60.85499 | <LOD | 1.810313 | <LOD | 29.13874 | 65.83074 |
| 69.05451 | <LOD | 59.6736 | <LOD | 122.5036 | <LOD | 6.634859 | <LOD | 41.00773 | 84.6175 |

| Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- | Zr |
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| 5.999351 | <LOD | 2.346126 | <LOD | 2.010122 | 8.415908 | 1.102521 | <LOD | 365.4112 | 23.44882 |
| 5.932377 | <LOD | 2.232108 | <LOD | 2.168306 | 3.481704 | 1.006383 | <LOD | 346.8542 | 16.7051 |
| 7.072444 | 14.93769 | 1.187897 | <LOD | 2.62909 | 119.8971 | 2.661518 | 4949.335 | 329.0549 | 358.8204 |
| 7.950183 | 23.20366 | 1.596016 | 434.6091 | 8.40209 | 210.9438 | 4.161819 | 9355.324 | 529.3508 | 244.0379 |
| 7.857223 | 23.95131 | 1.600413 | 454.2898 | 8.585077 | 202.2608 | 4.040848 | 9975.266 | 537.2819 | 237.6454 |
| 8.288036 | 39.42463 | 2.530804 | <LOD | 11.48722 | 68.25947 | 2.780665 | 3889.339 | 452.9583 | 126.732 |
| 8.517919 | 43.86346 | 2.327786 | <LOD | 8.21907 | 120.3359 | 3.344315 | 5486.271 | 468.4167 | 198.4615 |
| 6.877343 | 51.86628 | 1.824738 | <LOD | 2.299783 | 39.35313 | 1.738585 | 3567.055 | 311.5584 | 158.201 |
| 6.907494 | 55.19312 | 1.890151 | <LOD | 2.675403 | 42.42651 | 1.796724 | 2427.063 | 306.4254 | 124.8244 |
| 6.974041 | 51.89571 | 1.860746 | <LOD | 2.586273 | 27.48145 | 1.590892 | 2577.546 | 330.9717 | 91.35994 |
| 6.817411 | 47.91078 | 1.768393 | <LOD | 2.207094 | 28.89209 | 1.584245 | 2591.631 | 317.4632 | 101.1371 |
| 7.319328 | 27.3111 | 1.580909 | <LOD | 3.983353 | 43.0411 | 1.911616 | 3112.775 | 342.4342 | 90.04156 |
| 6.959285 | 40.8298 | 1.696923 | <LOD | 3.341413 | 42.19786 | 1.801056 | 3761.409 | 339.5999 | 105.1447 |
| 6.761308 | 47.34639 | 1.714942 | <LOD | 2.58713 | 40.99165 | 1.716101 | 3095.858 | 311.6916 | 125.388 |
| 6.931658 | 44.48717 | 1.724689 | <LOD | 2.881337 | 55.13305 | 1.954758 | 3389.772 | 318.72 | 118.2389 |
| 7.304931 | 48.16227 | 1.863907 | <LOD | 3.036104 | 46.73966 | 1.928285 | 4131.578 | 370.8948 | 105.0043 |
| 8.707397 | 39.13979 | 2.066058 | <LOD | 4.303829 | 79.83595 | 2.813454 | 5866.616 | 522.2851 | 108.3145 |
| 6.931984 | 44.51479 | 1.705732 | <LOD | 2.354864 | 52.69389 | 1.912564 | 2029.779 | 286.2277 | 97.26194 |
| 7.925185 | 36.17484 | 1.956412 | <LOD | 6.420464 | 75.20564 | 2.526929 | 4191.44 | 386.5046 | 191.2232 |
| 7.271447 | 39.41363 | 1.722597 | <LOD | 2.411864 | 47.2631 | 1.952705 | 2061.75 | 297.239 | 95.98582 |
| 9.797202 | 32.00575 | 2.545156 | <LOD | 10.59906 | 86.87711 | 3.409246 | 4477.991 | 513.9879 | 183.8237 |
| 7.351981 | 40.84892 | 1.790668 | <LOD | 4.223818 | 58.21936 | 2.119248 | 3895.989 | 372.6172 | 125.009 |
| 7.333718 | 36.54789 | 1.648005 | <LOD | 2.481971 | 150.0701 | 3.155432 | 4162.372 | 358.6669 | 179.376 |
| 7.413179 | 34.95446 | 1.66033 | <LOD | 2.739548 | 36.65379 | 1.809117 | 4059.907 | 350.5425 | 167.0882 |
| 6.677548 | 16.71941 | 1.192736 | <LOD | 2.170073 | 34.97343 | 1.628153 | 2260.755 | 252.4187 | 110.0875 |
| 9.640212 | 49.90607 | 2.422855 | <LOD | 3.064129 | 37.36503 | 2.32719 | 4379.736 | 531.3793 | 143.083 |
| 8.300144 | 50.61945 | 2.095511 | <LOD | 2.747157 | 68.75635 | 2.473552 | 5240.797 | 463.5825 | 162.9833 |
| 7.783348 | 46.54139 | 1.931443 | <LOD | 2.880168 | 50.3099 | 2.09504 | 3847.146 | 404.1054 | 167.0835 |
| 9.168686 | 40.78082 | 2.096489 | <LOD | 2.793375 | 35.0237 | 2.142285 | 2080.104 | 335.3847 | 126.4055 |
| | | | | | | | | | |
| 6.602603 | <LOD | 2.518862 | <LOD | 2.047681 | 8.499602 | 1.188352 | <LOD | 356.2765 | 32.37769 |
| 7.696906 | 14.62662 | 1.24737 | <LOD | 2.83615 | 116.1408 | 2.766877 | 5246.681 | 360.8716 | 415.492 |
| 11.06757 | 48.28319 | 2.672371 | <LOD | 3.992208 | 42.89548 | 2.734185 | 6322.539 | 588.2769 | 239.7302 |
| | | | | | | | | | |
| 9.530857 | 60.90313 | 2.617665 | <LOD | 3.175442 | 35.00604 | 2.268117 | 3569.325 | 417.7698 | 120.3155 |
| 7.441248 | 67.21836 | 2.21999 | <LOD | 2.736499 | 36.09958 | 1.840002 | 2685.942 | 335.6617 | 115.931 |
| | | | | | | | | | |
| 5.873762 | <LOD | 2.293416 | <LOD | 1.868408 | 7.10673 | 1.061509 | <LOD | 355.1133 | 24.99966 |
| 6.925757 | 14.70653 | 1.159206 | <LOD | 2.640958 | 121.7934 | 2.620576 | 5154.272 | 330.2537 | 396.4519 |

Zr +/-

1.682731
1.601499
4.702161
4.360091
4.271698
3.558651
4.196733
3.083877
2.820519
2.540839
2.581081
2.647484
2.649764
2.728264
2.743397
2.746495
3.328846
2.554622
3.803345
2.69752
4.720696
2.970903
3.431171
3.362476
2.598514
3.999936
3.647319
3.505798
3.586434

1.889765
5.462907
5.767822

3.714544
2.949709

1.665507
4.894354

| LiveTime | Date | Time | Reading | Pass/Fail | field1 | field2 | field3 | field4 | Pb |
|---|---|---|---|---|---|---|---|---|---|
| 29.46 | 29-Jul-09 | 14:34:09 | 1 | 0 | | | | | |
| 36.43 | 29-Jul-09 | 14:35:09 | 2 | -0.0068 | | | | | |
| 71.26 | 29-Jul-09 | 14:37:30 | 3 | | Ex-situ | Si Blank | | | <LOD |
| 71.23 | 29-Jul-09 | 14:39:55 | 4 | | Ex-situ | XRF 101 | | | 88.45875 |
| 70.52 | 29-Jul-09 | 14:42:27 | 5 | | Ex-situ | XRF 250 | | | 230.9406 |
| 69.58 | 29-Jul-09 | 14:44:28 | 6 | | Ex-situ | XRF 408 | | | 447.7553 |
| 69.57 | 29-Jul-09 | 14:50:15 | 7 | | Ex-situ | | FLFA | SW-34 | 11.70267 |

| Pb +/- | As | As +/- | Cu | Cu +/- | Ni | Ni +/- | Zn | Zn +/- | Hg |
|---|---|---|---|---|---|---|---|---|---|
| 5.176027 | <LOD | 3.433945 | <LOD | 12.63345 | <LOD | 26.04189 | <LOD | 6.082509 | <LOD |
| 3.707508 | <LOD | 8.131435 | <LOD | 12.14208 | <LOD | 25.1093 | <LOD | 5.310575 | <LOD |
| 6.146603 | <LOD | 13.40509 | <LOD | 14.86655 | <LOD | 33.59544 | <LOD | 8.049517 | <LOD |
| 10.83216 | 416.2647 | 10.33033 | <LOD | 17.95233 | <LOD | 46.237 | 12.8692 | 3.903818 | 427.249 |
| 2.554845 | 10.21057 | 2.046706 | <LOD | 17.13588 | <LOD | 42.57063 | 69.22964 | 4.625952 | <LOD |

| Hg +/- | Sb | Sb +/- | Fe | Fe +/- | Cr | Cr +/- | Cd | Cd +/- | Sn |
|---|---|---|---|---|---|---|---|---|---|
| 5.593548 | <LOD | 70.18934 | 263.4005 | 16.41856 | <LOD | 50.14841 | <LOD | 38.89968 | <LOD |
| 6.371562 | <LOD | 68.47898 | <LOD | 28.11223 | <LOD | 58.18924 | 79.21982 | 12.93502 | <LOD |
| 7.861193 | <LOD | 71.87363 | 5514.341 | 77.42389 | <LOD | 72.27628 | <LOD | 40.1827 | <LOD |
| 12.12254 | <LOD | 79.82826 | 32906.52 | 330.7951 | 526.3557 | 53.8197 | 279.6518 | 16.01352 | <LOD |
| 6.693583 | <LOD | 81.39335 | 33304.96 | 315.714 | <LOD | 107.7366 | <LOD | 43.39167 | <LOD |

| Sn +/- | Ag | Ag +/- | Ba | Ba +/- | Co | Co +/- | Mn | Mn +/- | Mo |
|---|---|---|---|---|---|---|---|---|---|
| 69.13171 | <LOD | 54.74278 | <LOD | 66.06611 | <LOD | 1.987137 | <LOD | 30.00258 | 46.841 |
| 67.66052 | <LOD | 54.7652 | <LOD | 62.29284 | <LOD | 1.4754 | <LOD | 28.26276 | 49.6166 |
| 70.796 | <LOD | 57.45124 | <LOD | 122.0012 | <LOD | 6.793046 | <LOD | 42.09027 | 66.09586 |
| 79.76004 | 118.2678 | 22.56422 | <LOD | 199.8702 | 25.70269 | 5.853 | <LOD | 84.60091 | 55.14018 |
| 78.72127 | <LOD | 60.60527 | <LOD | 143.8146 | 28.21124 | 5.57824 | 227.8834 | 29.96947 | 32.37455 |

| Mo +/- | Rb | Rb +/- | Se | Se +/- | Sr | Sr +/- | Ti | Ti +/- | Zr |
|---|---|---|---|---|---|---|---|---|---|
| 5.56139 | <LOD | 2.173825 | <LOD | 1.946464 | 6.553758 | 1.012942 | <LOD | 359.7454 | 27.94913 |
| 5.490945 | <LOD | 2.164355 | <LOD | 2.191494 | 4.165276 | 0.965915 | <LOD | 342.2427 | 9.764385 |
| 6.562539 | 14.94938 | 1.11436 | <LOD | 2.767322 | 121.7973 | 2.504483 | 5597.484 | 329.0719 | 430.7595 |
| 6.932709 | 25.61671 | 1.489103 | 481.7964 | 8.087246 | 218.6738 | 3.834568 | 10140.98 | 510.4055 | 251.8254 |
| 6.153443 | 75.51984 | 2.042189 | <LOD | 2.483247 | 26.36879 | 1.458385 | 2569.941 | 325.6668 | 87.17635 |

Zr +/-

1.625833
1.467279
4.936357
3.998382
2.315026

# Appendix B-4

# Chain of Custody

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw E&I | Tim Leahy | 9/2/09 | 132260 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 1 of 1** |
| 2113 Emmorton Park Rd | 410-612-6351(T) / 410-612-6326(F) | | |
| **City** | **State** | **Zip Code** | **Site Contact** | **Lab Contact** |
| Edgewood | MD | 21040 | | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** |
| Radford FLFA | |
| **Contract/Purchase Order/Quote No.** | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | 2oz jar | Analysis: TCLP metals | TCL 8081/8082, 8260 | Reactivity/Ferp/H | Backup | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LFDW02 | 9.2.09 | 11:24 | | | | X | | | | | | | X | — | — | — | — | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 9.2.09 | 1:00 | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

[redacted]

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

@ Michigan Disposal Waste Treatment Plant

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw E&I | Tim Leahy | 5.15.09 | 123005 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 1 of 1** |
| 2113 Emmorton Pk Rd | 410 622 6430 | | |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | |
| Edgewood / MD / 21040 | | Heidi Greer | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| Radford AAP FLFA | | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | ZnAc/NaOH | Rad | Analysis: Tuesbility | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radford FLFA Composite Sample | 5.14.09 | 9:00 | | | | X | | | | | | | X | 2 | |

**Possible Hazard Identification**

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 5.15.09 | 1:00 | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw E&I | Tim Lacy | 7/29/09 | 119106 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 1 of 1** |
| 2113 Emmorton Park Dr | 410-612-6350 | | |
| **City** | **State** / **Zip Code** | **Site Contact** | **Lab Contact** |
| Edgewood MD | MD / 21040 | | Linda Laver |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| Radford AAP FLFA Virginia | | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | None | Analysis: TAL metals/TCL PCBs | TAL metals/TCL PCBs 8082 | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LFSC01 / FLFA-FL-1 0-1' | 7/28/09 | 11:41 | | | | X | | | | | | | X | X | | |
| LFSC02 / FLFA-FL-9 0-1' | 7/27/09 | 13:38 | | | | X | | | | | | | X | | X | |
| LFSC03 / FLFA-FL-17 0-1' | 7/28/09 | 7:38 | | | | X | | | | | | | X | X | | |
| LFSC04 / FLFA-FL-18 1-2' | 7/28/09 | 9:35 | | | | X | | | | | | | X | | X | |
| LFSC05 / FLFA-SW-2 0-1 | 7/27/09 | 8:50 | | | | X | | | | | | | X | X | | |
| LFSC06 / FLFA-SW-10 0-1 | 7/27/09 | 9:53 | | | | X | | | | | | | X | | X | |
| LFSC07 / FLFA-FL-7 2-3 | 7/28/09 | 10:15 | | | | X | | | | | | | X | X | | |
| TMSC01 | 7/28/09 | 10:15 | | | | X | | | | | | | X | | X | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 7/29 | | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Shaw E&I | Tim Leahy | 7/29/09 | 109107 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 1 of 1** |
| 2113 Emmorton Park Dr | 410-612-6350 | | |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | |
| Edgewood / MD / 21040 | | Linda Lowe | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| Rockwood MMP CLEA | | | |
| **Contract/Purchase Order/Quote No.** | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Analysis: TAL Metals | TCL PCB's | 8290 | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 072909R | 7/29/09 | 13:19 | | X | | | | | X | | | | X | | | 500mL Poly x 1, HNO3 |
| 072909R | 7/29/09 | 13:19 | | X | | | | | / | | | | | X | | 2x 1000mL amber |
| 072909R | 7/29/09 | 13:19 | | X | | | | | | | | | | | X | 2x 1000mL amber |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | | | 1. Received By | | |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Appendix C

## Disposal Documentation

# Appendix C-1

# Manifests

# *THOMPSON TRUCKING, INC.*

THOMPSON TRUCKING, INC..
P.O. BOX 969
CONCORD,VA 24538-

(434) 993-2195

RECEIVED
AUG 17 2009
BY:

Invoice # 73069
Date 07/31/09

Cust # SHAWEI

ICC. MC193988
VA. 0011398448
FED. 54-1001331

90517825

SHAW ENVIROMENTAL, INC.
P.O. BOX 98519
BATON ROUGH, LA 70884

TERMS:
2% FINANCE CHARGE (24% APR)
WILL BE ADDED TO UNPAID BALANCES.



This Invoice Covers The Following Dates 07/27/09 TO 07/31/09

| Ticket/Date | Origin | Destination | Units | Charges |
|---|---|---|---|---|
| 243487 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/27/09 | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST | NUMBER->SHAW ENVIRO | PO NUMBER->ALLIANT TECH | | |
| 243486 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/27/09 | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST | NUMBER->SHAW ENVIRO | PO NUMBER->ALLIANT TECH | | |
| 243498 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/27/09 | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST | NUMBER->SHAW ENVIRO | PO NUMBER->ALLIANT TECH | | |
| 243497 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/27/09 | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST | NUMBER->SHAW ENVIRO | PO NUMBER->ALLIANT TECH | | |
| 243530 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/28/09 | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST | NUMBER->SHAW ENVIRO | PO NUMBER->ALLIANT TECH | | |
| 243548 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/28/09 | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST | NUMBER->SHAW ENVIRO | PO NUMBER->ALLIANT TECH | | |
| 243656 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/29/09 | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST | NUMBER->SHAW ENVIRO | PO NUMBER->ALLIANT TECH | | |
| 243643 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/29/09 | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST | NUMBER->SHAW ENVIRO | PO NUMBER->ALLIANT TECH | | |

++ Continued ++



PROFORMA GRAPHICS (434) 525-7688

# *THOMPSON TRUCKING, INC.*

Invoice # 73069
THOMPSON TRUCKING, INC.. Date 07/31/09

Continued from previous page.

Bill To: SHAW ENVIROMENTAL, INC.



TERMS:
2% FINANCE CHARGE (24% APR)
WILL BE ADDED TO UNPAID BALANCES.

This Invoice Covers The Following Dates 07/27/09 TO 07/31/09

| Date | Ticket | Origin | Destination | Units | Charges |
|---|---|---|---|---|---|
| | 243657 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/29/09 | | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST NUMBER->SHAW ENVIRO | | | PO NUMBER->ALLIANT TECH | | |
| | 243648 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/29/09 | | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST NUMBER->SHAW ENVIRO | | | PO NUMBER->ALLIANT TECH | | |
| | 243774 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 07/30/09 | | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST NUMBER->SHAW ENVIRO | | | PO NUMBER->ALLIANT TECH | | |

| SubTotals CWT | Tons | Bushels | Hours | Gallons | Yards | Charges |
|---|---|---|---|---|---|---|
| 0.0000 | 282.120 | 0.00 | 0 | 0 | 0.000 | 8250.00 |

Unit Totals:

| Tons | Trips |
|---|---|
| 282.120 | 11.00 |

Totals:

| Hauling | Product | Additional |
|---|---|---|
| 8250.00 | 0.00 | 0.00 |

Invoice Total ==> $ 8250.00

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

3135 7-27-09

Original
Ticket# 243487

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/27/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0019
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 123-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Radford AAP

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 133
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/27/2009 13:05:45 | Inbound | rodregus | | Gross | 80740 lb |
| Out | 07/27/2009 13:40:57 | Outbound | rodregus | | Tare | 30500 lb |
| | | | | | Net | 50240 lb |
| | | | | | Tons | 25.12 |

Comments

| Product | Lb% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|
| Cons-Soil-Net-Tons | 100 | 25.12 | Tons | | | | |
| PCENV-Environmental | 100 | | | | | | VA |
| FUEL-Fuel Surcharg | 100 | | | | | | VA |
| | | | | | | | VA |

Total Fees
Total Ticket

Driver's Signature Gary Rodriguez 3135

403WM

Site Name Amelia Landfill Phone No. (804) 561-5787

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

| WM ALF | 7-27-09 | |
|---|---|---|
| Authorized Agent Name (print) | Date | Signature |

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

169 7-27-09

Original
Ticket# 243486

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/27/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0010
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Radford AAP

Carrier Thompson Thompson trucking, Inc.
Vehicle# 169
Container 432
Driver
Check#
Billing # 0001432
Gen EPA ID
Grid

Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/27/2009 12:04:14 | Inbound | rodregus | | Gross | 74560 lb |
| Out | 07/27/2009 13:39:20 | Outbound | rodregus | | Tare | 29520 lb |
| | | | | | Net | 45440 lb |
| | | | | | Tons | 22.72 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee ID | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 22.72 | Tons | | | | VA |
| 2 | PSENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100. | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Bobby Porter

403WM

Site Name Amelia Landfill Phone No. (804) 561-5787

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

| WM ALF | 7-27-09 | R. Porter |
|---|---|---|
| Authorized Agent Name (print) | Date | Signature |

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

145 7-27-09

Original
Ticket# 242458

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/27/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0021
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Radford AAP

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 145 Volume
Container
Driver
Check#
Billing # 0001452
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/27/2009 13:43:38 | Inbound | rodregus | | Gross | 52160 lb |
| Out | 07/27/2009 14:21:38 | Outbound | rodregus | | Tare | 30960 lb |
| | | | | | Net | 21200 lb |
| | | | | | Tons | 85.61 |

Comments

| Product | LD% | Qty | Rate | Fees | Amount | Origin |
|---|---|---|---|---|---|---|
| 1 Cont Soil Met-Tons | 100 | 85.61 | Tons | | | VA |
| 2 PSENV-Environmenta | 100 | | % | | | VA |
| 3 FUEL-Fuel Surcharg | 100 | | % | | | VA |

Total Fees
Total Ticket

Driver's Signature K E Payne

403WM

Site Name Amelia Landfill Phone No. (804) 561-5787

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

| WM ALF | 7-27-09 | R. Porter |
|---|---|---|
| Authorized Agent Name (print) | Date | Signature |

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
PH: (804) 561-5787

190 7-27-09

Original
Ticket# 2402497

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/27/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0000
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (AFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 190
Container
Driver
Check#
Billing # 0001452
Gen EPA ID
Grid
Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/27/2009 13:44:11 | Inbound | rodregus | | Gross | 55000 lb |
| Out | 07/27/2009 14:08:04 | Outbound | rodregus | | Tare | 30320 lb |
| | | | | | Net | 24680 lb |
| | | | | | Tons | 27.34 |

Comments

| Product | LDM | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|
| 1 Cont Soil Met Tons 100 | | 27.34 | Tons | | | | VA |
| 2 PEDNV-Environmenta 100 | | | / | | | | VA |
| 3 FUEL-Fuel Surcharg 100 | | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

Site Name Amelia Landfill Phone No. (804) 561-5787

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

| WM - ALF | 7-27-09 | |
|---|---|---|
| Authorized Agent Name (print) | Date | Signature |

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243530

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/28/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Radford AAP

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 153
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/28/2009 07:11:21 | Inbound | judy | | Gross | 75320 lb |
| Out | 07/28/2009 07:44:33 | Outbound | judy | | Tare | 26060 lb |
| | | | | | Net | 49260 lb |
| | | | | | Tons | 24.63 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 24.63 | Tons | | | | VA |
| 2 | PEENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

Site Name Amelia Landfill Phone No (804) 561-5787
Address 20221 Maplewood Road, Jetersville, VA 23083
Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

D. Damdu — Authorized Agent Name (print)
7-28-09 — Date
D. Damdu — Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

437 7/28/09

Original
Ticket# 243548

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/28/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 437
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid
Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/28/2009 08:19:27 | Inbound | judy | | Gross | 85100 lb |
| Out | 07/28/2009 09:10:28 | Outbound | judy | | Tare | 30040 lb |
| | | | | | Net | 55060 lb |
| | | | | | Tons | 27.53 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 27.53 | Tons | | | | VA |
| 2 | P&ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Bruce 437

403WM

Site Name Amelia Landfill Phone No: (804) 561-5787

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No: 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

R Crosby 7-28-09 S. Crosby

Authorized Agent Name (print) Date Signature

Original - White Disposal Facility - Yellow Transporter - Pink Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243856

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/29/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Radford AAP

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 3578 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/29/2009 07:54:51 | Inbound | judy | | Gross | 71020 lb |
| Out | 07/29/2009 08:17:09 | Outbound | judy | | Tare | 25740 lb |
| | | | | | Net | 45280 lb |
| | | | | | Tons | 22.64 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 22.64 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

Site Name: Amelia Landfill Phone No: (804) 561-5787

Address: 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy | 7-29-09 | J. Sandy

Authorized Agent Name (print) | Date | Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243643

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/29/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Radford AAP

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 160 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/29/2009 07:05:58 | Inbound | judy | | Gross | 76780 lb |
| Out | 07/29/2009 07:22:44 | Outbound | judy | | Tare | 26100 lb |
| | | | | | Net | 50680 lb |
| | | | | | Tons | 25.34 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 25.34 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Walter Hunt Jr

403WM

Site Name Amelia Landfill Phone No. (804) 561-5787

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

D. Donaldy 7-29-09 D. Donaldy

Authorized Agent Name (print) Date Signature

Original - White Disposal Facility - Yellow Transporter - Pink Generator - Gold

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

3427 7-29-09

Original
Ticket# 243657

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/29/2009 | Vehicle# | 427 |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | Radford AAP | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/29/2009 07:56:08 | Inbound | judy | | Gross | 85800 lb |
| Out | 07/29/2009 08:51:38 | Outbound | judy | | Tare | 29100 lb |
| | | | | | Net | 56700 lb |
| | | | | | Tons | 28.35 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 28.35 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

Site Name Amelia Landfill Phone No. (804) 561-5787

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

| Q. Landy | 7-29-09 | Q. Landy |
|---|---|---|
| Authorized Agent Name (print) | Date | Signature |

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083. . .
Ph: (804) 561-5787

Original
Ticket# 243648

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/29/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Radford AAP

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 166 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | | | |
|---|---|---|---|---|---|---|
| In | 07/29/2009 07:11:14 | Inbound | judy | Inbound | Gross | 76040 lb |
| Out | 07/29/2009 07:29:20 | Outbound | judy | | Tare | 25960 lb |
| | | | | | Net | 50080 lb |
| | | | | | Tons | 25.04 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 25.04 | Tons | | | | VA |
| 2 | PEENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

iver's Signature

403WM

Site Name Amelia Landfill Phone No. (804) 561-5787

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

| Authorized Agent Name (print) | Date | Signature |
|---|---|---|
| C. Landy | 7-29-09 | C. Landy |

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

EARLY 7-30-09 130

Original
Ticket# 243774

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/30/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Radford AAP

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 130 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | | | |
|---|---|---|---|---|---|---|
| In | 07/30/2009 07:07:31 | Inbound | judy | Inbound | Gross | 86260 lb |
| Out | 07/30/2009 08:12:17 | Outbound | judy | | Tare | 30660 lb |
| | | | | | Net | 55600 lb |
| | | | | | Tons | 27.80 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 27.80 | Tons | | | | VA |
| 2 | PSENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Richard A Ell

403WM

Site Name Amelia Landfill Phone No (804) 561-5787

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540 Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

| C. Lamay | 7-30-09 | C. Lamay |
|---|---|---|
| Authorized Agent Name (print) | Date | Signature |

Original - White Disposal Facility - Yellow Transporter - Pink Generator - Gold

# THOMPSON TRUCKING, INC.

THOMPSON TRUCKING, INC..
P.O. BOX 969
CONCORD,VA 24538-

(434) 993-2195

SHAW ENVIROMENTAL, INC.
P.O. BOX 98519
BATON ROUGH, LA 70884

Invoice # 73167
Date 08/18/09

Cust # SHAWEI

ICC. MC193988
VA. 0011398448
FED. 54-1001331

TERMS:
2% FINANCE CHARGE (24% APR)
WILL BE ADDED TO UNPAID BALANCES.

PAGE 1

PO 517825 OP

This Invoice Covers The Following Dates 08/03/09 TO 08/03/09

| Ticket/Date | Origin | Destination | Units | Charges |
|---|---|---|---|---|
| 244070 | RADFORD AAP | AMELIA,VA | 1 TRIP | 750.00 |
| 08/03/09 | RADFORD ARMY AMMO | HAZ SOIL | | |
| MANIFEST NUMBER->SHAW ENVIRO | | PO NUMBER->ALLIANT TECH | | |

| SubTotals | CWT | Tons | Bushels | Hours | Gallons | Yards | Charges |
|---|---|---|---|---|---|---|---|
| | 0.0000 | 24.630 | 0.00 | 0 | 0 | 0.000 | 750.00 |

Unit Totals:

| Tons | Trips |
|---|---|
| 24.630 | 1.00 |

Totals:

| Hauling | Product | Additional |
|---|---|---|
| 750.00 | 0.00 | 0.00 |

Invoice Total ==> $ 750.00

RECEIVED
AUG 21 2009
BY:



PROFORMA GRAPHICS (434) 525-7688

455 455 8-03-09

# NON-HAZARDOUS WASTE MANIFEST

WASTE MANAGEMENT

For Office Use Only
Customer Acct No. _____

GENERATOR NO. RAAP 0028

Name Shaw E&I
Address PO Box 98519

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

455 8-03-09

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 244070

Customer Name Shaw E and I Shaw E & I
Ticket Date 08/03/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Radford AAP

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 455
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 08/03/2009 07:14:38 | Inbound | judy | | Gross | 78800 lb |
| Out | 08/03/2009 07:46:01 | Outbound | judy | | Tare | 29540 lb |
| | | | | | Net | 49260 lb |
| | | | | | Tons | 24.63 |

Comments

| Product | | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 24.63 | Tons | | | | VA |
| 2 | PSENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature [signature] 455

432

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0001

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 53,400 | pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
~~TRAFFIC ADMINISTRATOR~~
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name BOBBY TARTER

Vehicle No. #432 TRL #86

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7-22-09
Shipment Date

Bobby Tarter
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-22-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

135

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0002

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 52,700 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Authorized Agent Name (print)

7/22/09 — Date

H R Blankenship — Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Gary Kornau

Vehicle No. 135

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

| Shipment Date | Drivers Signature | Delivery Date | Drivers Signature |
|---|---|---|---|
| 7-22-09 | Gary Kornau | | |

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

| Authorized Agent Name (print) | Date | Signature |
|---|---|---|
| J. Sandy | 7-22-09 | J. Sandy |

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

100739VA

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. raap 0004

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 52,920 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Kenneth Eugene PAYNE

Vehicle No. 145 - 53

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/22/09
Shipment Date

Kenneth Eugene Payne
Drivers Signature

_____
Delivery Date

_____
Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-22-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

455

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0006

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 53,440 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name John E Diggs

Vehicle No. 455

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/22/09
Shipment Date

John E Diggs
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-23-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

432

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0007

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 52920 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name BOBBY TARTER

Vehicle No. 432 - 86

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Bobby Tarter
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Dandy
Authorized Agent Name (print)

7-23-09
Date

J. Dandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

135

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0008

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 53,040 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Gary Kirsh

Vehicle No. 3135

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Gary Kirsh
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-23-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

145

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP0009

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 51,820 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Kenneth Eugene Payne

Vehicle No. 145-53

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Kenneth E Payne
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-23-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

455 2:15pm

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0017

Name Shaw E&I
Address PO Box 98519
Baton Rouge, LA 70884
Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114
Radford, VA 24141
I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 51,920 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.
Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195
Drivers Name x Richard B. Patsel
Vehicle No. x 3087-13

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

x Richard B Patsel
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill
Address 20221 Maplewood Road, Jetersville, VA 23083
Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM/AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

3087

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0010

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 51540 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name John E Diggs - John E Diggs

Vehicle No. 455

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

| Shipment Date | Drivers Signature | Delivery Date | Drivers Signature |
|---|---|---|---|
| 7/23/09 | John E Diggs | | |

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM/AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

427

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0011

Name: Shaw E&I
Address: PO Box 98519
Baton Rouge, LA 70884
Phone No.: Beth Crawford 419-425-6071

Generating Location: Alliant Tech Systems, Inc.
(RFAAP) Route 114
Radford, VA 24141
I.D. No.: Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 52,880 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name: Thompson Trucking, Inc.
Address: 11939 Richmond Hwy.
Concord, VA 24538

Phone No.: 434-993-2195
Drivers Name: Eric Falls
Vehicle No.: 3427

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name: Amelia Landfill
Address: 20221 Maplewood Road, Jetersville, VA 23083
Permit No.: 540

Phone No.: (804) 561-5787
Time: _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM/AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

224

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0012

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 42,400 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Gary Critzer

Vehicle No. 224

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Gary W. Critzer
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WMAL
Gary W. Critzer
Authorized Agent Name (print)

7-24-09
Date

R. Potts
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

3081

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0013

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 48,960 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name X Ken McCullough

Vehicle No. X 3081

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09 x K. McCullough
Shipment Date — Drivers Signature

7-24-09 K. McCullough
Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM / AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

3758

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAP 0014

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 42,280 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261.or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name X Reginald Franklin

Vehicle No. X 3578

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09 X _____
Shipment Date Drivers Signature

_____ _____
Delivery Date Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

129

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0016

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 41,700 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x William C Baker

Vehicle No. x 3129

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09 x William C Baker
Shipment Date — Drivers Signature

_____ _____
Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM/AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

200

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0015

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 43,680 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name FRED PANNELL JR.

Vehicle No. #3200

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09 x Fred Pannell Jr.
Shipment Date — Drivers Signature

_____ _____
Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM / AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0005

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 55420 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name John E Diggs

Vehicle No. 455

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/22/09
Shipment Date

John E Diggs
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM R. Porter
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

#169 Vest

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0018

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 45,280 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
~~TRAFFIC ADMINISTRATOR~~
Authorized Agent Name (print)

July 27, 2009
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x ROBERT TARTER

Vehicle No. x ~~53~~ 169 - 86

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

July 27, 2009
Shipment Date

x Robert Tarter
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM ALF
Authorized Agent Name (print)

7-27-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

135

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. PAAP 0019

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 50,100 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x GARY KOMAN

Vehicle No. x 3135

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

Gary Koman
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM ALF
Authorized Agent Name (print)

7-27-09
Date

R. Parker
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

#190

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0020

Name Shaw E&I
Address PO Box 98519
Baton Rouge, LA 70884
Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114
Radford, VA 24141
I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 53,360 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.
Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195
Drivers Name x Charles L. Gravely
Vehicle No. x 190/#60

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

x Charles L Gravely
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill
Address 20221 Maplewood Road, Jetersville, VA 23083
Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM ALF
Authorized Agent Name (print)

7-27-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

# 145

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0021

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 50,180 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H K Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Kenneth Eugene Payne

Vehicle No. 145 / #53

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

Kenneth E. Payne
Drivers Signature

_____
Delivery Date

_____
Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM ALF
Authorized Agent Name (print)

7-27-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

153

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0024

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 48,980 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x Roger Christian

Vehicle No. 3153

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

x Roger Christian
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

G Sandy
Authorized Agent Name (print)

7-28-09
Date

G. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

437

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0022

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 54,080 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x Bruce Hartman

Vehicle No. 435 | #56

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

Bruce Hartman
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Dandy
Authorized Agent Name (print)

7-28-09
Date

J. Dandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

160

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0023

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 49740 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name X Chris Cook

Vehicle No. 160

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09 x Chris Cook
Shipment Date — Drivers Signature

Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-29-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

166

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0025

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 48,900 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/28/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x Anthony Chilton

Vehicle No. x 3166

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/28/09
Shipment Date

x Anthony Chilton
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

Q. Sandy
Authorized Agent Name (print)

7-29-09
Date

Q. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

3578

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0026

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc. (RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 45,240 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/28/09
Date

H. R. Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name X Reginald Frankl, in

Vehicle No. #3578

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/28/09
Shipment Date

x
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-29-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

427

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0027

Name: Shaw E&I
Address: PO Box 98519
Baton Rouge, LA 70884
Phone No.: Beth Crawford 419-425-6071

Generating Location: Alliant Tech Systems, Inc.
(RFAAP) Route 114
Radford, VA 24141
I.D. No.: Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 54,780 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/28/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name: Thompson Trucking, Inc.
Address: 11939 Richmond Hwy.
Concord, VA 24538

Phone No.: 434-993-2195
Drivers Name: x Eric Falls
Vehicle No.: 3196163

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/28/09
Shipment Date

x
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name: Amelia Landfill
Address: 20221 Maplewood Road, Jetersville, VA 23083
Permit No.: 540

Phone No.: (804) 561-5787

Time: _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-29-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

130 V

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0003

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 54,440 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Robert L Early Jr

Vehicle No. TR 130 TRAILER 58

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/22/09 Robert L Early Jr
Shipment Date — Drivers Signature

Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Dandy
Authorized Agent Name (print)

7-30-09
Date

J. Dandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

# INVOICE

Amelia Landfill
8000 Chambers Rd
Charles City, VA 23030

804-966-8705 (billing questions)

804-966-7041 (fax)

| | |
|---|---|
| Customer: | SHAW E & I |
| Account Number: | 410-0001492-0041-2 |
| Invoice Date: | 08/01/2009 |
| Invoice Number: | 0025306-0041-6 |
| Due Date: | Due Upon Receipt |
| WM ezPay Account ID: | 00015-20522-02005 |

| Current Invoice Amount | Total Amount Due |
|---|---|
| 18,096.07 | 18,096.07 |

Please pay total amount due. Thank you for your business.

**Account Summary**
Account Level PO# 517725

| Description | Amount |
|---|---|
| Previous Balance | 0.00 |
| Total Credits and Adjustments | 0.00 |
| Total Payments Received | 0.00 |
| **Total Current Charges** | 18,096.07 |
| **Total Amount Due** | **18,096.07** |
| **Total Amount Past Due** | 0.00 |

**Service Period: JULY 2009 SERVICE**

| Description | Amount |
|---|---|
| Landfill | 18,096.07 |
| **Total Current Charges** | **18,096.07** |

RECEIVED
AUG 10 2009
BY:

If full payment of the invoiced amount is not received within 30 days of the invoice date, you will be charged a monthly late fee of 1.5% of the unpaid amount, with a minimum monthly charge of $3.00, or such lesser late fee allowed under applicable law, regulation or contract. For each returned check, a fee will be assessed on your next billing equal to the maximum amount permitted by applicable state law.

Want to pay this bill on-line? Go to www.wm.com to learn more about WMezPay and make a convenient, secure payment.

| Current Due | Over 30 | Over 60 | Over 90 | Over 120 | Total Due |
|---|---|---|---|---|---|
| 18,096.07 | 0.00 | 0.00 | 0.00 | 0.00 | 18,096.07 |

WASTE MANAGEMENT

Amelia Landfill
8000 Chambers Rd
Charles City, VA 23030

804-966-8705 (billing questions)

804-966-7041 (fax)

Learn how we Think Green at www.wm.com/thinkgreen

## Payment Coupon

*Please detach and enclose this portion with your payment - do not send cash.*

| Your Account Number | |
|---|---|
| 410-0001492-0041-2 | |

| Invoice Date | Your Invoice Number |
|---|---|
| 08/01/2009 | 0025306-0041-6 |

| Due Date | Total Due | Amount Paid |
|---|---|---|
| Upon Receipt | 18,096.07 | |

Waste Management introduces WM ezPay!! Pay your WM bill on-line at www.wm.com.

To pay your invoice by phone, call 866-WMI-2PAY or 866-964-2729.

00414100001492000253060000180960700001809607 1

0001028 NM 9216 CP1 I0041L26

**SHAW E & I**
**PO BOX 98519**
**BATON ROUGE LA 70884-9519**

**Waste Management**
**Amelia Landfill**
**P.O. Box 13648**
**Philadelphia, PA 19101-3648**

002475

00015205220200 5

*From everyday collection to environmental protection, Think Green. Think Waste Management.*

Printed on recycled paper.

FOR CHANGE OF ADDRESS OR ANY SERVICE ISSUES CONTACT NUMBER ON PAGE 1

NOTICE: By sending your check, you are authorizing Waste Management to use information on your check to make a one-time electronic debit to your account at the financial institution indicated on your check. This electronic debit will be for the amount of your check and may occur as soon as the same day we receive your check. If you have questions regarding this check conversion process only, please call 866-701-0454. For any other unrelated issues, please contact the phone number listed on the front of your invoice.

002475

**Please send all bankruptcy correspondence to 2625 W. Grandview Rd. Ste 150 Phoenix, AZ 85023.**
**(This language is in compliance with 11 USC 342(c)(2) of the Bankruptcy Code.)**

WASTE MANAGEMENT

Amelia Landfill
8000 Chambers Rd
Charles City, VA 23030

| | |
|---|---|
| **Customer:** | SHAW E & I |
| **Account Number:** | 410-0001492-0041-2 |
| **Invoice Date:** | 08/01/2009 |
| **Invoice Number:** | 0025306-0041-6 |
| **Due Date:** | Due Upon Receipt |
| **WM ezPay Account ID:** | 00015-20522-02005 |

**Service Location: 410-1492 Shaw,E&I /Alliant Tech System: Rt 114: Radford Va 24141**

| Date | Ticket | Description | Quantity | U/M | Rate | Amount |
|---|---|---|---|---|---|---|
| 07/22/09 | 243134 | Veh#:432 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 26.76 | TON | 24.00 | 642.24 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 38.53 | 38.53 |
| | | Fuel surcharge | 1.00 | PCT | 21.90 | 21.90 |
| | | Ticket total | | | | 702.67 |
| 07/22/09 | 243143 | Veh#:135 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 26.35 | TON | 24.00 | 632.40 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 37.94 | 37.94 |
| | | Fuel surcharge | 1.00 | PCT | 21.56 | 21.56 |
| | | Ticket total | | | | 691.90 |
| 07/22/09 | 243157 | Veh#:invoic | | | | |
| | | Po#:517725 | | | | |
| | | Manifest prep/express mail | 50.00 | EAC | 1.00 | 50.00 |
| | | Manifest prep/express mail | 50.00 | EAC | 1.00 | 50.00 |
| | | Ticket total | | | | 100.00 |
| 07/22/09 | 243162 | Veh#:145 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 26.61 | TON | 24.00 | 638.64 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 38.32 | 38.32 |
| | | Fuel surcharge | 1.00 | PCT | 21.78 | 21.78 |
| | | Ticket total | | | | 698.74 |
| 07/23/09 | 243175 | Veh#:455 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 27.98 | TON | 24.00 | 671.52 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 40.29 | 40.29 |
| | | Fuel surcharge | 1.00 | PCT | 22.90 | 22.90 |
| | | Ticket total | | | | 734.71 |
| 07/23/09 | 243210 | Veh#:432 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 26.52 | TON | 24.00 | 636.48 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 38.19 | 38.19 |
| | | Fuel surcharge | 1.00 | PCT | 21.70 | 21.70 |
| | | Ticket total | | | | 696.37 |
| 07/23/09 | 243218 | Veh#:135 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 26.41 | TON | 24.00 | 633.84 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 38.03 | 38.03 |
| | | Fuel surcharge | 1.00 | PCT | 21.61 | 21.61 |
| | | Ticket total | | | | 693.48 |
| 07/23/09 | 243235 | Veh#:145 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 26.06 | TON | 24.00 | 625.44 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 37.53 | 37.53 |
| | | Fuel surcharge | 1.00 | PCT | 21.33 | 21.33 |
| | | Ticket total | | | | 684.30 |
| 07/24/09 | 243429 | Veh#:455 | | | | |
| | | Po#:517725 manf#:1 | | | | |

002476

**Service Location: 410-1492 Shaw E&I /Alliant Tech System: Rt 114: Radford,Va 24141**

| Date | Ticket | Description | Quantity | U/M | Rate | Amount |
|---|---|---|---|---|---|---|
| | | Special waste | 26.01 | TON | 24.00 | 624.24 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 37.45 | 37.45 |
| | | Fuel surcharge | 1.00 | PCT | 21.29 | 21.29 |
| | | Ticket total | | | | 682.98 |
| 07/24/09 | 243430 | Veh#:3087 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 26.03 | TON | 24.00 | 624.72 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 37.48 | 37.48 |
| | | Fuel surcharge | 1.00 | PCT | 21.30 | 21.30 |
| | | Ticket total | | | | 683.50 |
| 07/24/09 | 243432 | Veh#:427 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 26.48 | TON | 24.00 | 635.52 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 38.13 | 38.13 |
| | | Fuel surcharge | 1.00 | PCT | 21.67 | 21.67 |
| | | Ticket total | | | | 695.32 |
| 07/24/09 | 243436 | Veh#:224 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 21.21 | TON | 24.00 | 509.04 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 30.54 | 30.54 |
| | | Fuel surcharge | 1.00 | PCT | 17.36 | 17.36 |
| | | Ticket total | | | | 556.94 |
| 07/24/09 | 243444 | Veh#:3081 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 24.67 | TON | 24.00 | 592.08 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 35.52 | 35.52 |
| | | Fuel surcharge | 1.00 | PCT | 20.19 | 20.19 |
| | | Ticket total | | | | 647.79 |
| 07/24/09 | 243445 | Veh#:3758 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 21.15 | TON | 24.00 | 507.60 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 30.46 | 30.46 |
| | | Fuel surcharge | 1.00 | PCT | 17.31 | 17.31 |
| | | Ticket total | | | | 555.37 |
| 07/24/09 | 243448 | Veh#:129 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 20.99 | TON | 24.00 | 503.76 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 30.23 | 30.23 |
| | | Fuel surcharge | 1.00 | PCT | 17.18 | 17.18 |
| | | Ticket total | | | | 551.17 |
| 07/24/09 | 243449 | Veh#:200 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 21.94 | TON | 24.00 | 526.56 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 31.59 | 31.59 |
| | | Fuel surcharge | 1.00 | PCT | 17.96 | 17.96 |
| | | Ticket total | | | | 576.11 |
| 07/24/09 | 243450 | Veh#:455 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 27.94 | TON | 24.00 | 670.56 |
| | | Gnrtr:185-al | | | | |

UU2470

WASTE MANAGEMENT

Amelia Landfill
8000 Chambers Rd
Charles City, VA 23030

| | |
|---|---|
| **Account Number:** | 410-0001492-0041-2 |
| **Invoice Date:** | 08/01/2009 |
| **Invoice Number:** | 0025306-0041-6 |
| **Due Date:** | Due Upon Receipt |
| **WM ezPay Account ID:** | 00015-20522-02005 |

**Service Location: 410-1492 Shaw E&I /Alliant Tech System: Rt 114; Radford Va 24141**

| Date | Ticket | Description | Quantity | U/M | Rate | Amount |
|---|---|---|---|---|---|---|
| | | Environmental fee | 1.00 | PCT | 40.23 | 40.23 |
| | | Fuel surcharge | 1.00 | PCT | 22.87 | 22.87 |
| | | Ticket total | | | | 733.66 |
| 07/27/09 | 243486 | Veh#:169 | | | | |
| | | Po#:517725 manf#:0018 | | | | |
| | | Special waste | 22.72 | TON | 24.00 | 545.28 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 32.72 | 32.72 |
| | | Fuel surcharge | 1.00 | PCT | 18.59 | 18.59 |
| | | Ticket total | | | | 596.59 |
| 07/27/09 | 243487 | Veh#:135 | | | | |
| | | Po#:517725 manf#:0019 | | | | |
| | | Special waste | 25.12 | TON | 24.00 | 602.88 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 36.17 | 36.17 |
| | | Fuel surcharge | 1.00 | PCT | 20.56 | 20.56 |
| | | Ticket total | | | | 659.61 |
| 07/27/09 | 243497 | Veh#:190 | | | | |
| | | Po#:517725 manf#:0020 | | | | |
| | | Special waste | 27.34 | TON | 24.00 | 656.16 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 39.37 | 39.37 |
| | | Fuel surcharge | 1.00 | PCT | 22.38 | 22.38 |
| | | Ticket total | | | | 717.91 |
| 07/27/09 | 243498 | Veh#:145 | | | | |
| | | Po#:517725.manf#:0021 | | | | |
| | | Special waste | 25.61 | TON | 24.00 | 614.64 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 36.88 | 36.88 |
| | | Fuel surcharge | 1.00 | PCT | 20.96 | 20.96 |
| | | Ticket total | | | | 672.48 |
| 07/28/09 | 243530 | Veh#:153 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 24.63 | TON | 24.00 | 591.12 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 35.47 | 35.47 |
| | | Fuel surcharge | 1.00 | PCT | 20.57 | 20.57 |
| | | Ticket total | | | | 647.16 |
| 07/28/09 | 243548 | Veh#:437 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 27.53 | TON | 24.00 | 660.72 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 39.64 | 39.64 |
| | | Fuel surcharge | 1.00 | PCT | 22.99 | 22.99 |
| | | Ticket total | | | | 723.35 |
| 07/29/09 | 243643 | Veh#:160 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 25.34 | TON | 24.00 | 608.16 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 36.49 | 36.49 |
| | | Fuel surcharge | 1.00 | PCT | 21.16 | 21.16 |
| | | Ticket total | | | | 665.81 |
| 07/29/09 | 243648 | Veh#:166 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 25.04 | TON | 24.00 | 600.96 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 36.06 | 36.06 |

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**Service Location: 1410-1492 Shaw E&I /Alliant Tech System: Rt 114: Radford Va 24141**

| Date | Ticket | Description | Quantity | U/M | Rate | Amount |
|---|---|---|---|---|---|---|
| | | *Fuel surcharge* | 1.00 | PCT | 20.91 | 20.91 |
| | | Ticket total | | | | 657.93 |
| 07/29/09 | 243656 | Veh#:3578 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 22.64 | TON | 24.00 | 543.36 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 32.60 | 32.60 |
| | | Fuel surcharge | 1.00 | PCT | 18.91 | 18.91 |
| | | Ticket total | | | | 594.87 |
| 07/29/09 | 243657 | Veh#:427 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 28.35 | TON | 24.00 | 680.40 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 40.82 | 40.82 |
| | | Fuel surcharge | 1.00 | PCT | 23.68 | 23.68 |
| | | Ticket total | | | | 744.90 |
| 07/30/09 | 243774 | Veh#:130 | | | | |
| | | Po#:517725 manf#:1 | | | | |
| | | Special waste | 27.80 | TON | 24.00 | 667.20 |
| | | Gnrtr:185-al | | | | |
| | | Environmental fee | 1.00 | PCT | 40.03 | 40.03 |
| | | Fuel surcharge | 1.00 | PCT | 23.22 | 23.22 |
| | | Ticket total | | | | 730.45 |
| | | **Total Current Charges** | | | | 18,096.07 |

002477

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243134

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/22/2009 | Vehicle# | 432 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/22/2009 11:39:05 | Inbound | judy | | Gross | 83180 lb |
| Out | 07/22/2009 12:05:21 | Outbound | judy | | Tare | 29660 lb |
| | | | | | Net | 53520 lb |
| | | | | | Tons | 26.76 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 26.76 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Bobby Tuston

403WM

432

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0001

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 53,400 | pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
~~TRAFFIC ADMINISTRATOR~~
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name BOBBY TARTER

Vehicle No. #432 TRL #86

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7-22-09
Shipment Date

Bobby Tarter
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-22-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243143

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/22/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 135 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/22/2009 12:30:07 | Inbound | judy | | Gross | 83400 lb |
| Out | 07/22/2009 12:45:34 | Outbound | judy | | Tare | 30700 lb |
| | | | | | Net | 52700 lb |
| | | | | | Tons | 26.35 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 26.35 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Mary Kowal

403WM

135

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0002

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 52,700 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H.R.BLANKENSHIP, TRAFFIC ADMINISTRATOR — Authorized Agent Name (print)

7/22/09 — Date

H R Blankenship — Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Gary Kornau

Vehicle No. 135

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

| Shipment Date | Drivers Signature | Delivery Date | Drivers Signature |
|---|---|---|---|
| 7-22-09 | Gary Kornau | | |

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

| Authorized Agent Name (print) | Date | Signature |
|---|---|---|
| J. Sandy | 7-22-09 | J. Sandy |

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243162

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/22/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 145 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/22/2009 14:40:25 | Inbound | judy | | Gross | 84360 lb |
| Out | 07/22/2009 14:59:45 | Outbound | judy | | Tare | 31140 lb |
| | | | | | Net | 53220 lb |
| | | | | | Tons | 26.61 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 26.61 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature K. E Payne

403WM

100739VA

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. raap 0004

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 52,920 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Kenneth Eugene PAYNE

Vehicle No. 145 - 53

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/22/09
Shipment Date

Kenneth Eugene Payne
Drivers Signature

_____
Delivery Date

_____
Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-22-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243175

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/23/2009 | Vehicle# | 455 |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/23/2009 07:07:43 | Inbound | judy | | Gross | 86820 lb |
| Out | 07/23/2009 07:39:36 | Outbound | judy | | Tare | 30860 lb |
| | | | | | Net | 55960 lb |
| | | | | | Tons | 27.98 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 27.98 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature J L E Dagg #455

403WM

455

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0006

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 53,440 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name John E Diggs

Vehicle No. 455

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/22/09
Shipment Date

John E Diggs
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-23-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
PH: (804) 561-5787

Original
Ticket# 243210

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/23/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 5177 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 402 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/23/2009 10:57:15 | Inbound | judy | | Gross | 82740 lb |
| Out | 07/23/2009 11:22:45 | Outbound | judy | | Tare | 29700 lb |
| | | | | | Net | 53040 lb |
| | | | | | Tons | 26.52 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 26.52 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Bobby Tarte

403WM

432

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0007

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 52920 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name BOBBY TARTER

Vehicle No. 432 - 86

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Bobby Tarter
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Dandy
Authorized Agent Name (print)

7-23-09
Date

J. Dandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243218

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/23/2009 | Vehicle# | 135 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/23/2009 11:45:24 | Inbound | judy | | Gross | 83480 lb |
| Out | 07/23/2009 12:06:07 | Outbound | judy | | Tare | 30660 lb |
| | | | | | Net | 52820 lb |
| | | | | | Tons | 26.41 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 26.41 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Mary Fowlkes

403WM

135

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0008

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 53,040 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Gary Kirsh

Vehicle No. 3135

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Gary Kirsh
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-23-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243235

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/23/2009 | Vehicle# | 145 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/23/2009 13:27:58 | Inbound | judy | | Gross | 83200 lb |
| Out | 07/23/2009 13:48:53 | Outbound | judy | | Tare | 31080 lb |
| | | | | | Net | 52120 lb |
| | | | | | Tons | 26.06 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 26.06 | Tons | | | | VA |
| 2 | P&ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

145

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP0009

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 51,820 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Kenneth Eugene Payne

Vehicle No. 145-53

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Kenneth E Payne
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-23-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243429

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/24/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 455 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/24/2009 09:30:00 | Inbound | rodregus | | Gross | 81460 lb* |
| Out | 07/24/2009 09:30:00 | Outbound | rodregus | | Tare | 29440 lb* |
| | | | * Manual Weight | | Net | 52020 lb |
| | | | | | Tons | 26.01 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 26.01 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Richard Patsel

403WM

455 2:15pm

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0017

Name Shaw E&I
Address PO Box 98519
Baton Rouge, LA 70884
Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114
Radford, VA 24141
I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 51,920 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.
Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195
Drivers Name x Richard B. Patsel
Vehicle No. x 3087-13

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

x Richard B Patsel
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill
Address 20221 Maplewood Road, Jetersville, VA 23083
Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM/AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243430

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/24/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 3087
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

Volume

| | Time | Scale | Operator | Inbound | Gross | 80520 lb* |
|---|---|---|---|---|---|---|
| In | 07/24/2009 09:37:16 | Inbound | rodregus | | Tare | 28460 lb* |
| Out | 07/24/2009 09:37:16 | Outbound | rodregus | | Net | 52060 lb |
| | | | * Manual Weight | | Tons | 26.03 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 26.03 | Tons | | | | VA |
| 2 | P&ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature John Diggs

403WM

3087

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0010

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 51540 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name John E Diggs - John E Diggs

Vehicle No. 455

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

| Shipment Date | Drivers Signature | Delivery Date | Drivers Signature |
|---|---|---|---|
| 7/23/09 | John E Diggs | | |

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM/AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243432

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/24/2009 | Vehicle# | 467 |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/24/2009 09:40:20 | Inbound | rodregus | | Gross | 82080 lb* |
| Out | 07/24/2009 09:40:20 | Outbound | rodregus | | Tare | 29120 lb* |
| | | | * Manual Weight | | Net | 52960 lb |
| | | | | | Tons | 26.48 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 26.48 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Eric Falls

403WM

427

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0011

Name: Shaw E&I
Address: PO Box 98519
Baton Rouge, LA 70884
Phone No.: Beth Crawford 419-425-6071

Generating Location: Alliant Tech Systems, Inc.
(RFAAP) Route 114
Radford, VA 24141
I.D. No.: Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 52,880 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name: Thompson Trucking, Inc.
Address: 11939 Richmond Hwy.
Concord, VA 24538

Phone No.: 434-993-2195
Drivers Name: Eric Falls
Vehicle No.: 3427

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name: Amelia Landfill
Address: 20221 Maplewood Road, Jetersville, VA 23083
Permit No.: 540

Phone No.: (804) 561-5787
Time: _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM/AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243436

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/24/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 224
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid
Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/24/2009 09:49:11 | Inbound | rodregus | | Gross | 68040 lb* |
| Out | 07/24/2009 09:49:11 | Outbound | rodregus | | Tare | 25620 lb* |
| | | | * Manual Weigh | | Net | 42420 lb |
| | | | | | Tons | 21.21 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 21.21 | Tons | | | | VA |
| 2 | P&ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Gary Critzer

403WM

224

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0012

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 42,400 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Gary Critzer

Vehicle No. 224

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09
Shipment Date

Gary W. Critzer
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WMAL
Gary W. Critzer
Authorized Agent Name (print)

7-24-09
Date

R. Potts
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243444

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/24/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 0081 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/24/2009 10:24:12 | Inbound | rodregus | | Gross | 75260 lb* |
| Out | 07/24/2009 10:24:12 | Outbound | rodregus | | Tare | 25920 lb* |
| | | | * Manual Weight | | Net | 49340 lb |
| | | | | | Tons | 24.67 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 24.67 | Tons | | | | VA |
| 2 | P&ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature K McCullough

403WM

3081

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0013

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 48,960 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name X Ken McCullough

Vehicle No. X 3081

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09 x K. McCullough
Shipment Date — Drivers Signature

7-24-09 K. McCullough
Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM / AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243445

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/24/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 3758 3578
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid
Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/24/2009 10:25:33 | Inbound | rodregus | | Gross | 68000 lb* |
| Out | 07/24/2009 10:25:33 | Outbound | rodregus | | Tare | 25700 lb* |
| | | | * Manual Weight | | Net | 42300 lb |
| | | | | | Tons | 21.15 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 21.15 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Reginald Franklin

403WM

3758

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAP 0014

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 42,280 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261.or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name X Reginald Franklin

Vehicle No. X 3578

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09 X _____
Shipment Date Drivers Signature

_____ _____
Delivery Date Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243448

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/24/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 29
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid
Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/24/2009 10:28:46 | Inbound | rodregus | | Gross | 66940 lb* |
| Out | 07/24/2009 10:28:46 | Outbound | rodregus | | Tare | 24960 lb* |
| | | | * Manual Weight | | Net | 41980 lb |
| | | | | | Tons | 20.99 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 20.99 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature William Baker

403WM

129

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0016

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 41,700 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x William C Baker

Vehicle No. x 3129

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09 x William C Baker
Shipment Date — Drivers Signature

_____ _____
Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM/AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243449

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/24/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 200 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/24/2009 10:30:05 | Inbound | rodregus | | Gross | 69020 lb* |
| Out | 07/24/2009 10:30:05 | Outbound | rodregus | | Tare | 25140 lb* |
| | | | * Manual Weight | | Net | 43880 lb |
| | | | | | Tons | 21.94 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 21.94 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Fred Patrick

403WM

200

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0015

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 43,680 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/23/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name FRED PANNELL JR.

Vehicle No. #3200

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/23/09 x Fred Pannell Jr.
Shipment Date — Drivers Signature

_____ _____
Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM / AL
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243450

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/24/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 155
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid
Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/24/2009 10:33:07 | Inbound | rodregus | | Gross | 84340 lb* |
| Out | 07/24/2009 10:33:07 | Outbound | rodregus | | Tare | 28460 lb* |
| | | | * Manual Weight | | Net | 55880 lb |
| | | | | | Tons | 27.94 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 27.94 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature John Riggs

403WM

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0005

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 55420 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name John E Diggs

Vehicle No. 455

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/22/09
Shipment Date

John E Diggs
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM R. Porter
Authorized Agent Name (print)

7-24-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243486

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/27/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0018
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tec Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 69
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid
Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/27/2009 13:04:14 | Inbound | rodregus | | Gross | 74960 lb |
| Out | 07/27/2009 13:39:26 | Outbound | rodregus | | Tare | 29520 lb |
| | | | | | Net | 45440 lb |
| | | | | | Tons | 22.72 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 22.72 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Bobby Tatum

403WM

#169 Vest

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0018

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 45,280 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
~~TRAFFIC ADMINISTRATOR~~
Authorized Agent Name (print)

July 27, 2009
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x ROBERT TARTER

Vehicle No. x ~~53~~ 169 - 86

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

July 27, 2009
Shipment Date

x Robert Tarter
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM ALF
Authorized Agent Name (print)

7-27-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold



Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243487

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/27/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0019
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 135 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/27/2009 13:05:45 | Inbound | rodregus | | Gross | 80740 lb |
| Out | 07/27/2009 13:40:57 | Outbound | rodregus | | Tare | 30500 lb |
| | | | | | Net | 50240 lb |
| | | | | | Tons | 25.12 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 25.12 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Mary Kovacs

403WM

135

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. PAAP 0019

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 50,100 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x GARY KOMAN

Vehicle No. x 3135

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

Gary Koman
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM ALF
Authorized Agent Name (print)

7-27-09
Date

R. Parker
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243497

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/27/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0020
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 130 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/27/2009 13:44:11 | Inbound | rodregus | | Gross | 85000 lb |
| Out | 07/27/2009 14:20:04 | Outbound | rodregus | | Tare | 30320 lb |
| | | | | | Net | 54680 lb |
| | | | | | Tons | 27.34 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 27.34 | Tons | | | | VA |
| 2 | P&ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

#190

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0020

Name Shaw E&I
Address PO Box 98519
Baton Rouge, LA 70884
Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114
Radford, VA 24141
I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 53,360 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.
Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195
Drivers Name x Charles L. Gravely
Vehicle No. x 190/#60

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

x Charles L Gravely
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill
Address 20221 Maplewood Road, Jetersville, VA 23083
Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM ALF
Authorized Agent Name (print)

7-27-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243498

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/27/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0021
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 145
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid
Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/27/2009 13:45:22 | Inbound | rodregus | | Gross | 82180 lb |
| Out | 07/27/2009 14:21:38 | Outbound | rodregus | | Tare | 30960 lb |
| | | | | | Net | 51220 lb |
| | | | | | Tons | 25.61 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 25.61 | Tons | | | | VA |
| 2 | P&ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature K E Jayne

403WM

# 145

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0021

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 50,180 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H K Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Kenneth Eugene Payne

Vehicle No. 145 / #53

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

Kenneth E. Payne
Drivers Signature

_____
Delivery Date

_____
Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

WM ALF
Authorized Agent Name (print)

7-27-09
Date

R. Porter
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243530

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/28/2009 | Vehicle# | 153 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/28/2009 07:11:21 | Inbound | judy | | Gross | 75320 lb |
| Out | 07/28/2009 07:44:33 | Outbound | judy | | Tare | 26060 lb |
| | | | | | Net | 49260 lb |
| | | | | | Tons | 24.63 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 24.63 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

153

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0024

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 48,980 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x Roger Christian

Vehicle No. 3153

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

x Roger Christian
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

G Sandy
Authorized Agent Name (print)

7-28-09
Date

G. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold



Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243548

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/28/2009 | Vehicle# | 37 |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/28/2009 08:19:27 | Inbound | judy | | Gross | 85100 lb |
| Out | 07/28/2009 09:10:28 | Outbound | judy | | Tare | 30040 lb |
| | | | | | Net | 55060 lb |
| | | | | | Tons | 27.53 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 27.53 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Bruce 437

403WM

437

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0022

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 54,080 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x Bruce Hartman

Vehicle No. 435 | #56

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09
Shipment Date

Bruce Hartman
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Dandy
Authorized Agent Name (print)

7-28-09
Date

J. Dandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243643

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/29/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 130
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

Volume

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/29/2009 07:05:58 | Inbound | judy | | Gross | 76780 lb |
| Out | 07/29/2009 07:22:44 | Outbound | judy | | Tare | 26100 lb |
| | | | | | Net | 50680 lb |
| | | | | | Tons | 25.34 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 25.34 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature Walter Hunt Jr

403WM

160

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0023

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.
(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 49740 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/27/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.
Concord, VA 24538

Phone No. 434-993-2195

Drivers Name X Chris Cook

Vehicle No. 160

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/27/09 x Chris Cook
Shipment Date — Drivers Signature

Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-29-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold



Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243648

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/29/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 66 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/29/2009 07:11:14 | Inbound | judy | | Gross | 76040 lb |
| Out | 07/29/2009 07:29:20 | Outbound | judy | | Tare | 25960 lb |
| | | | | | Net | 50080 lb |
| | | | | | Tons | 25.04 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 25.04 | Tons | | | | VA |
| 2 | P&ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

166

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0025

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 48,900 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/28/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name x Anthony Chilton

Vehicle No. x 3166

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/28/09
Shipment Date

x Anthony Chilton
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

Q. Sandy
Authorized Agent Name (print)

7-29-09
Date

Q. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243656

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/29/2009 | Vehicle# | 3578 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/29/2009 07:54:51 | Inbound | judy | | Gross | 71020 lb |
| Out | 07/29/2009 08:17:09 | Outbound | judy | | Tare | 25740 lb |
| | | | | | Net | 45280 lb |
| | | | | | Tons | 22.64 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 22.64 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

3578

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0026

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc. (RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 45,240 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/28/09
Date

H. R. Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name X Reginald Frankl, in

Vehicle No. #3578

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/28/09
Shipment Date

x
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-29-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243657

Customer Name Shaw E and I Shaw E & I
Ticket Date 07/29/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO 1) 517725 2) 517725 3) 517725
Profile 100739VA (Lead Contaminated Soil)
Generator 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP)

Carrier THOMPSON Thompson trucking, Inc.
Vehicle# 427 Volume
Container
Driver
Check#
Billing # 0001492
Gen EPA ID
Grid

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/29/2009 07:56:08 | Inbound | judy | | Gross | 85800 lb |
| Out | 07/29/2009 08:51:38 | Outbound | judy | | Tare | 29100 lb |
| | | | | | Net | 56700 lb |
| | | | | | Tons | 28.35 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 28.35 | Tons | | | | VA |
| 2 | P6ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

Total Fees
Total Ticket

Driver's Signature

403WM

427

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0027

Name: Shaw E&I
Address: PO Box 98519
Baton Rouge, LA 70884
Phone No.: Beth Crawford 419-425-6071

Generating Location: Alliant Tech Systems, Inc.
(RFAAP) Route 114
Radford, VA 24141
I.D. No.: Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 54,780 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/28/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name: Thompson Trucking, Inc.
Address: 11939 Richmond Hwy.
Concord, VA 24538

Phone No.: 434-993-2195
Drivers Name: x Eric Falls
Vehicle No.: 3196163

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/28/09
Shipment Date

x
Drivers Signature

Delivery Date

Drivers Signature

## DISPOSAL FACILITY

Site Name: Amelia Landfill
Address: 20221 Maplewood Road, Jetersville, VA 23083
Permit No.: 540

Phone No.: (804) 561-5787

Time: _____

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

J. Sandy
Authorized Agent Name (print)

7-29-09
Date

J. Sandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

WASTE MANAGEMENT

Amelia Landfill
20221 Maplewood Rd
Jetersville, VA, 23083
Ph: (804) 561-5787

Original
Ticket# 243774

| | | | |
|---|---|---|---|
| Customer Name | Shaw E and I Shaw E & I | Carrier | THOMPSON Thompson trucking, Inc. |
| Ticket Date | 07/30/2009 | Vehicle# | 130 |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing # | 0001492 |
| State Waste Code | | Gen EPA ID | |
| Manifest | 1 | Grid | |
| Destination | | | |
| PO | 1) 517725 2) 517725 3) 517725 | | |
| Profile | 100739VA (Lead Contaminated Soil) | | |
| Generator | 185-ALLIANT TECH SYSTEMS INC Alliant Tech Systems Inc (RFAAP) | | |

| | Time | Scale | Operator | Inbound | | |
|---|---|---|---|---|---|---|
| In | 07/30/2009 07:07:31 | Inbound | judy | | Gross | 86260 lb |
| Out | 07/30/2009 08:12:17 | Outbound | judy | | Tare | 30660 lb |
| | | | | | Net | 55600 lb |
| | | | | | Tons | 27.80 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | Cont Soil Met-Tons | 100 | 27.80 | Tons | | | | VA |
| 2 | P&ENV-Environmenta | 100 | | % | | | | VA |
| 3 | FUEL-Fuel Surcharg | 100 | | % | | | | VA |

1

Total Fees
Total Ticket

Driver's Signature Rule & EW

403WM

130 V

WASTE MANAGEMENT

# NON-HAZARDOUS WASTE MANIFEST

**For Office Use Only**

Customer Acct No. _____

## GENERATOR

NO. RAAP 0003

Name Shaw E&I

Address PO Box 98519

Baton Rouge, LA 70884

Phone No. Beth Crawford 419-425-6071

Generating Location Alliant Tech Systems, Inc.

(RFAAP) Route 114

Radford, VA 24141

I.D. No. Jeremy Flint 540-639-7631

| WASTE CODE | WASTE DESCRIPTION | QUANTITY | UNITS |
|---|---|---|---|
| 100739VA | Lead contaminated Soil | 1 | Load |
| | | 54,440 | Pounds |
| | | | |

CODES
D - DRUM
B - BAG
C - CARTON
P - POUNDS
Y - YARDS
O - OTHER

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any aplicble state law: That each waste has been properly described , classified and packaged, and is in proper condition for transporting according to applicable regulation.

H. R. BLANKENSHIP
TRAFFIC ADMINISTRATOR
Authorized Agent Name (print)

7/22/09
Date

H R Blankenship
Signature

## TRANSPORTER

Transporters Name Thompson Trucking, Inc.

Address 11939 Richmond Hwy.

Concord, VA 24538

Phone No. 434-993-2195

Drivers Name Robert L Early JR

Vehicle No. TR 130 TRAILER 58

I hereby certify that the above named material was picked up at the generator site listed above and delivered without incident to the disposal facility listed below.

7/22/09 Robert L Early JR
Shipment Date — Drivers Signature

Delivery Date — Drivers Signature

## DISPOSAL FACILITY

Site Name Amelia Landfill

Address 20221 Maplewood Road, Jetersville, VA 23083

Permit No. 540

Phone No. (804) 561-5787

Time

I hereby certify that the above listed material has been accepted and that information presented on this document are true and accurate.

Q. Dandy
Authorized Agent Name (print)

7-30-09
Date

Q. Dandy
Signature

Original - White | Disposal Facility - Yellow | Transporter - Pink | Generator - Gold

# Appendix C-2

# Profiles

**WASTE MANAGEMENT INC.**

**SPECIAL WASTE APPROVAL NOTIFICATION FORM**

| | |
|---|---|
| **Disposal Facility:** Amelia Landfill | **WMI Waste Code:** VA/5401/070809/100739VA |
| **Generator's Name:** Alliant Tech Systems Inc. | **SWDA No.:** |
| **Common Name of Waste:** Lead Contaminated Soils + RCRA Empty Drums FB 7-24-09 | **State Waste Code:** |
| **Volume of Waste:** 800-1000 Tons | **WMI Initiator:** Tom Foley |
| **Customer/Broker:** TBD | **WMI Initiator's Phone No.:** 804-512-7800 |
| **Eastern Area** | |
| **Environmental Signature:** Reynolds Brown | **Date:** 7/8/2009 |
| **Phone: 540-295-5738** | |

**Conditions of Approval:**

1. No Free Liquids or Unapproved Wastes
2. Cover With Approved Cover Materials Per Applicable Regulations, Facility Permit, etc.
3. Must Comply With Applicable Federal, State, And Local Requirements

**Re-analysis:**

**Effective Date of Approval:** 7/8/2009

**Expiration Date of Approval:** 7/8/2010

**Level Two Tests:**

(OTHER TESTS MAY BE PERFORMED AT THE DISCRETION OF THE WASTE INSPECTOR)

| | | | |
|---|---|---|---|
| (1) pH | X | (9) TOX | |
| (2) Paint Filter Test | | (10) TPH | |
| (3) Flash Point Test | X | (11) Reactive Cyanide | X |
| (4) TCLP Metals | X | (12) Reactive Sulfide | X |
| (5) TCLP VOC | X | (13) PCB | X |
| (6) TCLP SVOC | X | (14) BTEX | |
| (7) TCLP Herb | | (15) MSDS | |
| (8) TCLP Pest | | (16) Other | |

**Landfill Manager's Signature (or Designee):** **Date:**

**Phone Number:**

**Conditions of Approval:**

**Hauling Company Manager's Signature (If Required):** **Date:**

# Generator's Nonhazardous Waste Profile Sheet

National Account Custom

Requested Disposal Facility Amelia Landfill Profile Number 100739VA

☐ Renewal for Profile Number _____ Waste Approval Expiration Date 7/8/10

## A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: Alliant Tech Systems Inc. (RFAAP) Jeremy.Flint@ATK.com
2. Site Address: Route 114
3. City/ZIP: Radford, 24141
4. State: VA
5. County: Montgomery
6. Contact Name/Title: ~~Beth Crawford~~ Jeremy Flint
7. Email Address: ~~beth.crawford@shawgrp.com~~ 540 639 8109
8. Phone: ~~419-425-6071~~ 5406397668 9. FAX: ~~419-425-608~~
10. NAICS Code: 325920
11. Generator USEPA ID #: VA1210020730
12. State ID# (if applicable): NA

## B. Customer Information ☐ same as above

P. O. Number: _____

1. Customer Name: Shaw E&I
2. Billing Address: PO Box 98519
3. City, State and ZIP: Baton Rouge, LA, 70884
4. Contact Name: Beth Crawford
5. Contact Email: beth.crawford@shawgrp.com
6. Phone: 419-425-6071 FAX: 419-425-6085
7. Transporter Name: Thompson Trucking
8. Transporter ID # (if appl.): _____
9. Transporter Address: State Highway 460 East PO Box 969
10. City, State and ZIP: Concord, VA, 24538

## C. Waste Stream Information

1. DESCRIPTION

a. Common Waste Name: Non-Hazardous Lead Contaminated Soils
State Waste Code(s): NA

b. Describe Process Generating Waste or Source of Contamination: Army Ammunition Plant
Final remediation of the Former Lead Furnace Area at Radford ~~Arsenal~~. The grossly contaminated soils were removed several years ago. Final removal is current to meet clean-up standards
+RCRA Empty Drums RB 7-27-09

c. Typical Color(s): Brown

d. Strong Odor? ☐ Yes ☑ No Describe: _____

e. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other: _____

f. Layers? ☐ Single layer ☐ Multi- layer ☑ NA

g. Water Reactive? ☐ Yes ☑ No If Yes, Describe: _____

h. Free Liquid Range (%): _____ to _____ ☑ NA(solid)

i. pH Range: ☐ ≤2 ☐ 2.1-12.4 ☐ ≥12.5 ☑ NA(solid) ☐ Actual: 7.5 (SW 846 - 9045C)

j. Liquid Flash Point: ☐ < 140°F ☐ ≥ 140°F ☑ NA(solid) ☐ Actual: _____

k. Flammable Solid: ☐ Yes ☑ No

l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ☐ (See Attached)

| Constituents (Total Composition Must be = 100%) | Lower Range | Unit of Measure | Upper Range | Unit of Measure |
|---|---|---|---|---|
| 1. Soils | 90 | % | 100 | % |
| 2. PPE and Expendables | 0 | % | 10 | % |
| 3. Barium (TCLP) | 2.2 | ~~PPM~~ mg/L | | |
| 4. Cadmium (TCLP) | 0.009 | PPM mg/L | | |
| 5. Lead (TCLP) | 0.69 | PPM mg/L | | |
| 6. | | | | |

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION

a. ☑ One Time Event ☐ Base ☐ Repeat Event

b. Estimated Annual Quantity: 800-1000 ☑ Tons ☐ Cubic Yards ☐ Drums ☐ Gallons ☐ Other (specify): _____

c. Shipping Frequency: 10-15 trucks daily Units per ☐ Month ☐ Quarter ☐ Year ☑ One Time ☐ Other

d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☑ No

e. USDOT Shipping Description (if applicable): NA

3. SAFETY REQUIREMENTS (Handling, PPE, etc.): None

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May 2008

# Generator's Nonhazardous Waste Profile Sheet

100739

## D. Regulatory Status (Please check appropriate responses)

1. Is this a USEPA (40 CFR Part 261)/State hazardous waste? If yes, contact your sales representative. ☐ Yes ☑ No
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☑ No
   - ☐ Delisted Hazardous Waste
   - ☐ Excluded Wastes Under 40 CFR 261.4
   - ☐ Treated Hazardous Waste Debris
   - ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☐ Yes ☑ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☑ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☐ No
5. Does the waste represented by this waste profile sheet contain concentrations of regulated Polychlorinated Biphenyls (PCBs)? ☐ Yes ☑ No
   a. If yes, is disposal regulated under TSCA? ☐ Yes ☑ No
6. Does the waste contain untreated, regulated, medical or infectious waste? ☐ Yes ☑ No
7. Does the waste contain asbestos? ☐ Yes ☑ No If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☑ No
   If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☒ Yes ☐ No

## E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material; ✓
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor; ✓
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and ✓
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the Contractor if applicable). ✓
5. Check all that apply:
   - ☑ Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: _____ # Pages: _____
   - ☑ Only the analyses identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: Test America LFDW02
   - ☐ Additional information necessary to characterize the profiled waste has been attached (other than analytical). Indicate the number of attached pages: _____
   - ☐ I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.
   - ☐ By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

**Certification Signature:** Jeremy Flint **Title:** Environmental Engineer

**Company Name:** Alliant Techsystems Inc. **Name (Print):** Jeremy Flint

**Date:** 7/8/09

## FOR WM USE ONLY

**Management Method:** ☑ Landfill ☐ Bioremediation ☐ Non-hazardous solidification ☐ Other: _____

**Approval Decision:** ☑ Approved ☐ Not Approved

**Waste Approval Expiration Date:** 7/8/10

**Management Facility Precautions, Special Handling Procedures or Limitation on approval:** _____

- ☐ Shall not contain free liquid
- ☐ Shipment must be scheduled into disposal facility
- ☐ Approval Number must accompany each shipment
- ☐ Waste Manifest must accompany load

**WM Authorization Name / Title:** _____ **Date:** 7/8/09

**State Authorization (if Required):** _____ **Date:** _____

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# Appendix D

## Shipping Logs

## RADFORD ARSENAL

**Truck Log**
**Shaw Project No. 123461**
**FLFA - Thompson Trucking**

| Ship Date | Truck/Trailer Number | Manifest No. | In | Out | Tare Wt. | Net Wt. | Gross Wt. | Actual Tons |
|---|---|---|---|---|---|---|---|---|
| 07/22/09 | 3432/86 | RAAP 0001 | 0750 | 0830 | 29,880 | 53,400 | 83,280 | 26.70 |
| | 3135/54 | RAAP 0002 | 0900 | 0925 | 30,740 | 52,700 | 83,440 | 26.35 |
| | 3130/58 | RAAP 0003 | 0950 | 1025 | 30,340 | 54,440 | 84,780 | 27.22 |
| | 3145/53 | RAAP 0004 | 1030 | 1100 | 31,400 | 52,920 | 84,320 | 26.46 |
| | 3455/44 | RAAP 0005 | 1130 | 1200 | 28,900 | 55,420 | 84,320 | 27.71 |
| | 3455/92 | RAAP 0006 | 1300 | 1415 | 30,500 | 53,440 | 83,940 | 26.72 |
| 07/23/09 | 2432/86 | RAAP 0007 | 0730 | 0800 | 29,740 | 52,920 | 82,660 | 26.46 |
| | 3135/54 | RAAP 0008 | 0830 | 0850 | 30,760 | 52,740 | 83,500 | 26.37 |
| | 3145/53 | RAAP 0009 | 0950 | 1015 | 31,300 | 51,820 | 83,120 | 25.91 |
| | 3455/42 | RAAP 0010 | 1130 | 1200 | 29,160 | 51,540 | 80,700 | 25.77 |
| | 3427/63 | RAAP 0011 | 1150 | 1210 | 29,040 | 52,880 | 81,920 | 26.44 |
| | 224 | RAAP 0012 | 1245 | 1305 | 25,620 | 42,400 | 68,020 | 21.20 |
| | 3081 | RAAP 0013 | 1245 | 1315 | 25,960 | 48,960 | 74,920 | 24.48 |
| | 3578 | RAAP 0014 | 1315 | 1345 | 25,380 | 42,280 | 67,660 | 21.14 |
| | 3200 | RAAP 0015 | 1315 | 1345 | 24,880 | 43,680 | 68,560 | 21.84 |
| | 429 | RAAP 0016 | 1315 | 1345 | 24,700 | 41,700 | 66,400 | 20.85 |
| | 3087/13 | RAAP 0017 | 1350 | 1415 | 28,100 | 51,920 | 80,020 | 25.96 |
| 07/27/09 | 3169/86 | RAAP 0018 | 0925 | 1000 | 29,620 | 45,280 | 74,900 | 22.64 |
| | 3135/54 | RAAP 0019 | 0930 | 1000 | 30,720 | 50,100 | 80,820 | 25.05 |
| | 3190/60 | RAAP 0020 | 1000 | 1035 | 30,540 | 53,360 | 83,900 | 26.68 |
| | 3145/53 | RAAP 0021 | 1000 | 1030 | 32,020 | 50,180 | 82,200 | 25.09 |
| | 3437/56 | RAAP 0022 | 1045 | 1100 | 29,680 | 54,080 | 83,760 | 27.04 |
| | 3160 | RAAP 0023 | 1325 | 1415 | 25,500 | 49,740 | 75,240 | 24.87 |
| | 3153 | RAAP 0024 | 1325 | 1415 | 25,760 | 48,980 | 74,740 | 24.49 |
| 07/28/09 | 3166 | RAAP 0025 | 1345 | 1400 | 25,480 | 48,900 | 74,380 | 24.45 |
| | 3578 | RAAP 0026 | 1405 | 1420 | 25,580 | 45,240 | 70,820 | 22.62 |
| | 3196/63 | RAAP 0027 | 1430 | 1450 | 29,120 | 54,780 | 83,900 | 27.39 |
| 07/29/09 | 3455/42 | RAAP 0028 | 1245 | 1330 | 30,120 | 48,220 | 78,340 | 24.11 |
| | | **28 loads** | | | | | | **702.01** |

# Appendix E

## Quality Control Reports

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**SWMU 39 / SWMU 51**

**Wednesday, July 15, 2009**

**Weather:**
Sunny/Warm 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, continuing work at SWMU 39 (backfill)
JWB trucks at gate 10 getting inspected and signed in for today
Incinerator running and backfill continues with 8 trucks running today, incinerator running out by 4:00 pm
At end of day moved equipment out of SWMU 39, dozer to SWMU 51 and Excavator to FLFA

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| Wednesday, July 15, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1705 | 17050 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |

| | | | |
|---|---|---|---|
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, July 16, 2009**
**Friday, July 17, 2009**

**Weather:**
Showers 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, moved to FLFA, incinerator cannot shut down for 10 days
Sampled drums from drilling at SWMU 41 and prepared FLFA for excavation activities
Also worked both days at SWMU 51 grading area and repairing rain damage
let crew go early Friday due to heavy rains

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| Wednesday, July 15, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1705 | 17050 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |

| | | | |
|---|---|---|---|
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, July 20, 2009**

**Weather:**
Heavy Rain today

**Description of Work:**
NO WORK TODAY

| Backfill SWMU 39 | Loads | Total Cyds |
|---|---|---|
| Wednesday, June 10, 2009 | 79 | 790 |
| Monday, June 15, 2009 | 80 | 800 |
| Monday, June 22, 2009 | 91 | 910 |
| Tuesday, June 23, 2009 | 92 | 920 |
| Wednesday, June 24, 2009 | 96 | 960 |
| Thursday, June 25, 2009 | 123 | 1230 |
| Friday, June 26, 2009 | 124 | 1240 |
| Monday, June 29, 2009 | 124 | 1240 |
| Tuesday, June 30, 2009 | 132 | 1320 |
| Wednesday, July 01, 2009 | 120 | 1200 |
| Thursday, July 02, 2009 | 110 | 1100 |
| Tuesday, July 07, 2009 | 79 | 790 |
| Wednesday, July 08, 2009 | 96 | 960 |
| Thursday, July 09, 2009 | 120 | 1200 |
| Monday, July 13, 2009 | 84 | 840 |
| Tuesday, July 14, 2009 | 71 | 710 |
| Wednesday, July 15, 2009 | 84 | 840 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU39 backfill** | 1705 | 17050 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |

| | | | |
|---|---|---|---|
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, July 21, 2009**

**Weather:**
Cloudy/Humid 55-75 degrees

**Description of Work:**
Mobilized to FLFA and began excavation at the area.
Had plant utility people on site to help locate water line running along roadway to bottom of burn pit from top parking area
determined line below 1 foot level we are removing and will be cautious when digging near line
Stockpiling material at top of slope area for loadout beginning tomorrow
Walked burn pad to remove any debris which could puncture truck tires

| Truck/Trailer Number | Time In | Time Out | Manifest No. | Tare | Net (est.) | Gross (est.) |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | 0 | |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, July 22, 2009**

**Weather:**
Partly Cloudy today 55-75 degrees

**Description of Work:**
On site at FLFA, tailgat held and work plan discussed with crew
Thompson trucking scheduled 6 trucks today, staggered 1 hour apart
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving
Continued excavating after loadout completed, discovered buried drum (30 gal) and stopped work, notified ATK and USACE and waited for response from Fire Dept and Safety Dept. Drum removed at ATK's direction and liquid sampled. Overpacked drum in a 55 gallon steel drum and moved to storage area, continued excavation after drum secured

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3432/86 | 0750 | 0830 | RAAP 0001 | 29,880 | 53,400 | 83,280 |
| 3135/54 | 0900 | 0925 | RAAP 0002 | 30,740 | 52,700 | 83,440 |
| 3130/58 | 0950 | 1025 | RAAP 0003 | 30,340 | 54,440 | 84,780 |
| 3145/53 | 1030 | 1100 | RAAP 0004 | 31,400 | 52,920 | 84,320 |
| 3455/44 | 1130 | 1200 | RAAP 0005 | 28,900 | 55,420 | 84,320 |
| 3455/92 | 1300 | 1415 | RAAP 0006 | 30,500 | 53,440 | 83,940 |
| | | | | | 322,320 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 6 | |
| Estimated pounds shipped: today | 322,320 | |
| Trucks loaded: to date | 6 | TONS |
| estimated pounds shipped: to date | 322,320 | 161.16 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, July 23, 2009**

**Weather:**
Sunny/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgat held and work plan discussed with crew
Thompson trucking scheduled 11 trucks today, staggered 30 minutes apart
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
Continued excavating after loadout completed, uncovered terra cota pipe from seprtic tank, ATK Utility department
on site to check and gave us permission to remove since tank and system were disconnected and abandoned.

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3432/86 | 0730 | 0800 | RAAP 0007 | 29,740 | 52,920 | 82,660 |
| 3135/54 | 0830 | 0850 | RAAP 0008 | 30,760 | 52,740 | 83,500 |
| 3145/53 | 0950 | 1015 | RAAP 0009 | 31,300 | 51,820 | 83,120 |
| 3455/42 | 1130 | 1200 | RAAP 0010 | 29,160 | 51,540 | 80,700 |
| 3427/63 | 1150 | 1210 | RAAP 0011 | 29,040 | 52,880 | 81,920 |
| 224 | 1245 | 1305 | RAAP 0012 | 25,620 | 42,400 | 68,020 |
| 3081 | 1245 | 1315 | RAAP 0013 | 25,960 | 48,960 | 74,920 |
| 3578 | 1315 | 1345 | RAAP 0014 | 25,380 | 42,280 | 67,660 |
| 3200 | 1315 | 1345 | RAAP 0015 | 24,880 | 43,680 | 68,560 |
| 429 | 1315 | 1345 | RAAP 0016 | 24,700 | 41,700 | 66,400 |
| 3087/13 | 1350 | 1415 | RAAP 0017 | 28,100 | 51,920 | 80,020 |
| | | | RAAP 0018 | 0 | 0 | 0 |
| | | | | | 532,840 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 11 | |
| Estimated pounds shipped: today | 532,840 | |
| Trucks loaded: to date | 17 | TONS |
| estimated pounds shipped: to date | 855,160 | 427.58 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |

| | | | |
|---|---|---|---|
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, July 24, 2009**

**Weather:**
Sunny/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgat held and work plan discussed with crew
No Trucks today, continued excavating and began XRF of areas previously excavated and stockpiles loaded out the past few days. Excavation remaining can be completed and stockpiled in various locations to expedite future loadouts.
Also spent time regrading SWMU 51 in preparation for top soil placement scheduled for next week

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | RAAP 0018 | 0 | 0 | 0 |
| | | | | | 0 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 0 | |
| Estimated pounds shipped: today | 0 | |
| Trucks loaded: to date | 17 | TONS |
| estimated pounds shipped: to date | 855,160 | 427.58 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |

| | | | |
|---|---|---|---|
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Monday, July 27, 2009**

**Weather:**
Partly Cloudy/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Thompson trucking scheduled 7 trucks today,should complete excavation if field testing has been accurate
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
FLFA excavation complete today, need 3 more trucks to finish shipments.

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3169/86 | 0925 | 1000 | RAAP 0018 | 29,620 | 45,280 | 74,900 |
| 3135/54 | 0930 | 1000 | RAAP 0019 | 30,720 | 50,100 | 80,820 |
| 3190/60 | 1000 | 1035 | RAAP 0020 | 30,540 | 53,360 | 83,900 |
| 3145/53 | 1000 | 1030 | RAAP 0021 | 32,020 | 50,180 | 82,200 |
| 3437/56 | 1045 | 1130 | RAAP 0022 | 29,680 | 54,080 | 83,760 |
| 3160 | 1325 | 1415 | RAAP 0023 | 25,500 | 49,740 | 75,240 |
| 3153 | 1325 | 1415 | RAAP 0024 | 25,760 | 48,980 | 74,740 |
| | | | | | 351,720 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 7 | |
| Estimated pounds shipped: today | 351,720 | |
| Trucks loaded: to date | 24 | TONS |
| estimated pounds shipped: to date | 1,206,880 | 603.44 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Tuesday, July 28, 2009**

**Weather:**
Partly Cloudy/Warm today 65-80 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Thompson trucking scheduled 3 trucks today,should complete loadout if field testing has been accurate
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
FLFA loadout almost completed today, need one additional truck, all XRF tests came back clean.

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3166 | 1345 | 1400 | RAAP 0025 | 25,480 | 48,900 | 74,380 |
| 3578 | 1405 | 1420 | RAAP 0026 | 25,580 | 45,240 | 70,820 |
| 3196/63 | 1430 | 1450 | RAAP 0027 | 29,120 | 54,780 | 83,900 |
| | | | | 0 | 0 | 0 |
| | | | | | 148,920 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 3 | |
| Estimated pounds shipped: today | 148,920 | |
| Trucks loaded: to date | 27 | TONS |
| estimated pounds shipped: to date | 1,355,800 | 677.90 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Wednesday, July 29, 2009**

**Weather:**
Cloudy/Showers today 65-75 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Thompson trucking scheduled 1 last truck today, will complete loadout at FLFA
Trucks are permitted 5% for hauling when not using interstate highway system which they will not to get to landfill
Weighing trucks before and after at ATK scalehouse by shipping and receiving, some trucks are going to be tri-axle dumps
FLFA loadout almost completed today, need one additional truck, all XRF tests came back clean, packing samples today

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| 3455/42 | 1245 | 1330 | RAAP 0028 | 30,120 | 48,220 | 78,340 |
| | | | | 0 | 0 | 0 |
| | | | | | 48,220 | |

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 1 | |
| Estimated pounds shipped: today | 48,220 | |
| Trucks loaded: to date | 28 | **TONS** |
| estimated pounds shipped: to date | 1,404,020 | **702.01** |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |

| | | | |
|---|---|---|---|
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Thursday, July 30, 2009**

**Weather:**
Cloudy/Showers today 65-75 degrees

**Description of Work:**
On site at FLFA, tailgate held and work plan discussed with crew
Decontamination of equipment on schedule for today
Clean up entire FLFA area being conducted, cleaning roadways and raking burn pad surface to remove tracks from trucks and equipment, leaving area as clean as prior to work on site
Informed today that SWMU 39 will not be shutting down next week as they need more time to play catch up

| Truck/Trailer Number | Time In | Time Out | Document No. | Tare | Net | Gross |
|---|---|---|---|---|---|---|
| | | | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 |
| | | | | | 0 | |

| Shipments: | Date | |
|---|---|---|
| Trucks loaded: today | 0 | |
| Estimated pounds shipped: today | 0 | |
| Trucks loaded: to date | 28 | TONS |
| estimated pounds shipped: to date | 1,404,020 | 702.01 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up.

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

**RADFORD ARSENAL**
**OPERATIONS DAILY REPORT**
**Shaw Project No. 123461**
**FLFA/SWMU 39/SWMU51**

**Friday, July 31, 2009**

**Weather:**
Showers 75 - 85 degress today

**Description of Work:**
Crew onsite this morning at 0700, back at gate 10 for backfill at SWMU 51
SWMU 39 still not shutting down for work during 8am to 4pm hours, behind on burning
Started backfill had to stop when rains started and became heavy, stopped at 1500 hours for weekend

| Top Soil SWMU 51 | Loads | Total Cyds |
|---|---|---|
| Wednesday, July 29, 2009 | 16 | 160 |
| Friday, July 31, 2009 | 13 | 130 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | 0 | 0 |
| | | |
| **Total SWMU 51 Top Soil** | 29 | 290 |

**Delays in Schedule:**
ATK notified Shaw today that we will not be allowed into incinerator area from 7/16 - 7/26/09
ATK behind on burning and have to catch up, informed Shaw they needed another week or two

**Verbal Instructions:**
None

| Contractors On Site: | | | | |
|---|---|---|---|---|
| Shaw E & I | Steve Kritak | Chet Brinser | Stephen Banks | |
| Shaw E & I | Greg Griswold | | | |
| USACE | W. Rathbun | | | |
| | | | | |

| Equipment On Site: | Date On Site | Shaw/Rental | Demob from Site |
|---|---|---|---|
| Cat 330 Excavator | 01/08/09 | Shaw | |
| 2004 Chevy Colorado 4x4 | 01/06/09 | Shaw | |
| 2006 Chevy 4x4 Silverado | 01/06/09 | Shaw | |
| Ford F150 Pick Up Truck | 03/31/09 | Hertz | 04/30/09 |
| JD 700 Dozer | 06/10/09 | Hertz | |
| IR 84" Vibratory Roller | 06/10/09 | Hertz | |
| Skid Steer | 03/26/09 | Hertz | 04/06/09 |
| Cat 924 Loader | 03/27/09 | Carter Cat | 04/27/09 |
| 12" Chipper | 03/27/09 | Carter Cat | 04/06/09 |
| JD 200 Excavator | 04/01/09 | Hertz | 06/05/09 |
| JD 650 Dozer | 04/16/09 | Hertz | 04/28/09 |
| JD 230 Excavator | 05/02/09 | Hertz | 05/15/09 |

# Appendix F

## Site Safety Reports and Equipment Inspection

## Daily Safety Meeting

**Project Name:** Radford SWMU 51 **Date:** 2/16/09

**Project Number:** 123461 **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_X_ safety glasses, hard hat, safety boots
_X_ site safety plan review and location
_X_ equipment and machinery familiarization
__ employee Right-To-Know/MSDS location
_X_ open pits, excavations, and site hazards
_X_ vehicle safety and driving/road conditions
_X_ portable tool safety and awareness
_X_ overhead utility locations and clearance
_X_ first aid, safety, and PPE location
__ sharp object, rebar, and scrap metal hazards
_X_ safety is everyone's responsibility
__ latex gloves inner/nitrile gloves outer
_X_ excavation/trenching inspections/documentation
__ full face respirators with proper cartridges
_X_ upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_ work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_ slips, trips, and falls
_X_ directions to hospital
__ anticipated visitors
__ electrical ground fault
_X_ public safety and fences
_X_ excavator swing and loading
_X_ orderly site and housekeeping
_X_ smoking in designated areas
_X_ leather gloves for protection
__ effects of the night before
__ vibration related injuries
_X_ fire extinguisher locations
_X_ eye wash station locations
_X_ decontamination procedures

_X_ daily work scope
_x_ emergency protocol
__ parking and laydown
_X_ hot work permits
_X_ strains and sprains
_X_ noise hazards
_X_ no horseplay
_X_ heat and cold stress
_X_ backing up hazards
_X_ accidents are costly
_X_ dust and vapor control
_X_ refueling procedures
__ confined space entry
__ flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Air monitoring will be conducted during excavation and loading operations

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Steve Kritak | Steve Kritak | Shaw |
| Stephen Banks | Stephen Banks | |
| Greg Griswold | | Shaw |
| Chester J. Bopp | Chester J. Bopp | Shaw |

# JOB SAFETY ANALYSIS

DATE: 2/16/09
JOB#: 123461
PERMIT#:
ISSUED BY: N/A

Shaw The Shaw Group Inc.

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Roadway

Wind Direction: N/A

Evacuation Route: SAME AS entry from gate 10

Assembly Point: Gate 10

Supervisor of Work: S. KRITAK

JSA Prepared By: S. Kritak

Are other crews in area NO

| | | |
|---|---|---|
| New: | ✓ | |
| Revised: | | |

**Job Task**
(What are You Doing)

Preparing Area for excavation & loadout of Trucks

**Site Cleanup**

Keep clean every day

**Potential Hazards**

Excavation Safety
Truck Traffic
Vehicle Traffic while escorting to gate

**Recommended Action or Procedure**

**Audit the Job**
Audit Time:

**Supervisors Comments**

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

Shaw The Shaw Group Inc.

S. KRITAK / S. BANKS

**SUPERVISION/FOREMAN** _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ✓ Required
- ___ Cold Work
- ___ Hot Work
- ✓ Entry Permit (ATK)
- ✓ All Conditions Met
- ✓ Signed Off When Complete
- ___ Other

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ✓ Other WATCH FOR EXPLOSIVE TRANSPORT TRUCKS

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** Feb. 17, 2009

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Begin loading trucks today Air Monitoring to begin - Escort every truck in & out.

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | S Kritak | Shaw |
| S. BANKS | Steve Banks | Shaw |
| GREG BRISWOLD | | Shaw |
| CHESTER J. BRYSON | Chester J Bryson | Shaw |
| | | |

992

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL level D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: gate 10

Wind Direction:

Evacuation Route: known trk. route

Assembly Point: gate 10

Supervisor of Work: S Kritak

JSA Prepared By: S. Kritak

Are other crews in area

New: X

Revised:

**Job Task**
(What are You Doing)

loading trucks - direct load
Air monitoring - dust and OV
~~Esc~~ Escort trucks in & out of site

**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

TRAFFIC
Equip. operations
EXCAVATION safety
Cold Stress

**Supervisors Comments**

**Recommended Action or Procedure**

Follow SOP's established by CO.
Follow RADFORD RULES & ALL
TRAFFIC REGULATIONS

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ✓ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 02/25/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Continue Operations as same as last 2 weeks, Excavate, Load out and Escort to/from Gate

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S Kritak | S Kritak | Shaw |
| J Banks | J Banks | Shaw |
| Greg Griswold | | Shaw |
| Chet Bartlett Sr | Chet Bartlett Sr | SHAW |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: GATE 10

Wind Direction: —

Evacuation Route:
GATE 10 to Site

Assembly Point:
GATE 10

Supervisor of Work: S. KRITAK

JSA Prepared By: S. Kritak

Are other crews in area NO

New: X

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

EXCAVATION OF WASTE AT SWMU 51
LOAD OUT OF WASTE INTO TRUCKS
ESCORT TRUCK TO/FROM SITE TO GATE 10
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EXCAVATION SAFETY / CONFINED SPACE
SAFE EQUIPMENT OPERATIONS
TRAFFIC RULES / REGULATIONS

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SITE RULES / REGULATIONS
FOLLOW ALL SHAW SOP'S FOR
EQUIP. OPS.
EXCAVATION SAFETY

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

# JOB SAFETY ANALYSIS

Shaw The Shaw Group Inc.

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 02/26/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Continue following Safe Work Practices and all relevant RAAP & SHAW SOP's for Work.

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Kritak | S Kritak | Shaw |
| S. Banks | S Banks | Shaw |
| C. Brewer | C Brewer | Shaw |
| Greg Gatewood | Greg Gatewood | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: GATE 10
Wind Direction: N/A
Evacuation Route: Transportation Route
Assembly Point: GATE 10

Supervisor of Work: S. Kritak
JSA Prepared By: Same
Are other crews in area No

| | |
|---|---|
| New: | X |
| Revised: | |

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

EXCAVATE CONTAMINATED SOILS
ESCORT TRUCKS INTO/OUT OF SITE
TAKE POST EX. SAMPLES
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EQUIPMENT OPERATIONS
TRUCK/TRAFFIC OPERATIONS
EXCAVATION SAFETY

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SOP's AND RADFORD RULES WHILE ON SITE

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 2/27/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Continue work as we have, keep up good safe work practices & following SOP's

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | | Shaw |
| C. BETTS JR | | Shaw |
| LEE GRISWOLD | | Shaw |
| S. BANKS | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: —
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Kuttak
JSA Prepared By: Same
Are other crews in area No

| | |
|---|---|
| New: | ✓ |
| Revised: | |

**Job Task**
(What are You Doing)

ESCORT TRUCKS IN & OUT OF SITE
LOADOUT OF MATERIAL INTO TRUCKS
EXCAVATE REMAINING WASTE
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

TRAFFIC RULES / ESCORTING
EXCAVATION SAFETY / CONFINED SPACE
EQUIPMENT OPERATIONS
KEEP UP HOUSEKEEPING
CONTINUE AIR MONITORING

**Supervisors Comments**

**Recommended Action or Procedure**

JUST CONTINUE TO FOLLOW SOP's AND RADFORD RULES

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** March 3, 2009

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Xtremely Cold today, don't spend to much time outside is Wind, take frequent breaks

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | S Kritak | Shaw |
| S. BANKS | S Banks | Shaw |
| GREG GRISWOLD | | Shaw |
| C BRENNER | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route: Transport Route

Assembly Point: Gate 10

Supervisor of Work: S. Kuttak

JSA Prepared By: Same

Are other crews in area

New: X

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

Benching back excavation

**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Equipment Operations
Excavation Safety
Cold Stress
Slip Trip Fall hazards

**Supervisors Comments**

**Recommended Action or Procedure**

Take frequent breaks in truck, keep truck running and heated.
Follow SOP's for Excavation & Equipment Ops.

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 03/04/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Cold Stress, extremely cold this A.M., Keep frequent breaks to warm up

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | | Shaw |
| S. BANKS | | Shaw |
| GREG GRISWOLD | | Shaw |
| Chastain T. Bethea | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project): ~~SEA 1 WEST~~ Radford Arsenal - SWMU 51

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: S. Kizitak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: S Kizitak |
| | Wind Direction: N/A | Are other crews in area No |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: GATE 10 | New: X<br>Revised: |

**Job Task**
(What are You Doing)

Excavation of Contaminated Soils
Decon of Excavator bucket
Post Ex. Samples of excavation (taken by machine)
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Equipment Operations
Excavation Safety
Cold Stress
Slip trip Fall

**Supervisors Comments**

**Recommended Action or Procedure**

Follow All SOP's and Radford Policies
KEEP TAKING FREQUENT breaks to warm up
Watch Slippery, uneven Surfaces

**Supervisor's Initials:**

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ✓ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ✓ Ladder (~~Tied off~~ Step ladder)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ✓ Other Cold Stress

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: Stay at least 50' From Amo Magazine Bldg.

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/5/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** loading trucks today(8), escort in/out of Gate 10, loadout remaining sludge/soil mix

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | S Kritak | Shaw |
| JEFF GRISWOLD | | Shaw |
| STEPHEN BANKS | Stephen Banks | Shaw |
| Chester Brush | Chester Brush | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Keitah
JSA Prepared By: Same
Are other crews in area NO

| | | |
|---|---|---|
| New: | X | |
| Revised: | | |

**Job Task**
(What are You Doing)

Escort trucks in and out Gate 10
Load trucks at SWMU 51
Clean up ~~Site~~ Excavator
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Equip Operations
Excavation Safety
Traffic Rules

**Supervisors Comments**

**Recommended Action or Procedure**

Follow all SOP's for Excavation and Equipment Operations

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | [signatures] | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: 3/5/09
JOB#: 123461
PERMIT#:
ISSUED BY: [illegible]

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/6/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Clean up site, clean up roadway, prepare to secure for weekend.

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | SKritak | Shaw |
| J. BATES | J Bates | SHAW |
| GREG GREENWOOD | | Shaw |
| Chester J. Benson | Chester J Benson | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: follow Transport route
Assembly Point:
Gate 10

Supervisor of Work: S. Kozitak
JSA Prepared By: Same
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Roadway Cleanup
**Site Cleanup**
Secure for Wkend.

**Audit the Job**
Audit Time:

**Potential Hazards**

Truck traffic on roadway
Equipment Operations
Slip Trip Fall

**Supervisors Comments**

**Recommended Action or Procedure**

Follow Safe Work Practices

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/9/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** loading remaining 6 loads of waste

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | SKritak | Shaw |
| JEL GRISWOLD | JT Griswold | Shaw |
| STEPHEN BANKS | Stephen Banks | Shaw |
| CHESTER J. BAILEY | Chester J Bailey | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: SKRITAK
JSA Prepared By: Same
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Escort Trucks in/out SITE
Loadout Waste/Equip. Ops.
Traffic Safety
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip Trip Fall
Traffic
Equipment Operation Safety
Excavation Safety

**Supervisors Comments**

**Recommended Action or Procedure**

Follow all SOP's for Excavation
Follow Radford Rules / Escort drivers
Not lighters / matches or open flames

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 3/10/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Clean up Excavator, Take remaining Post Excavation samples and secure site

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Kritak | S Kritak | Shaw |
| Stephen Banks | Stephen Banks | Shaw |
| Greg Gerrard | Greg Gerrard | Shaw |
| Chester J. Bednar | Chester J. Bednar | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: 3/10/09
JOB#: 123461
PERMIT#:
ISSUED BY: N/A

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Kritac
JSA Prepared By: SKritac
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Clean up Excavation Area
Pull last Ex. Samples
Ship Samples to Lab
Site Cleanup

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip Trip Fall
Equipment Ops.

**Supervisors Comments**

**Recommended Action or Procedure**

Follow SOPs during work activities.

**Supervisor's Initials:**

| Crew Name Signatures: | |
|---|---|
| JSA Completed at Tailgate Safety Meeting | |

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** March 16, 17, 18, 19 & 20, 2009 WEEKLY TAILGATE (Reviewed daily)

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Site Clean up and Prep for loading additional 6 trucks on the 20th Also prep being done to start SWMU 39 3/24/09

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Bowers | Stephen Bowers | Shaw |
| Chester J. Bowser | Chester J. Bowser | Shaw |
| Greg Griswold | Greg Griswold | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. ICRIMAL
JSA Prepared By: SAME
Are other crews in area No

| | |
|---|---|
| New: | X |
| Revised: | |

**Job Task**
(What are You Doing)

Prep for Additional Excavating / Loading
Prep for SWMU 39 (Clearing / Grubbing)
Escort / Route Procedures
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EQUIP operations
Chain Saw Safety Reviewed
TRAFFIC / Explosive hauling Vehicles

**Supervisors Comments**

**Recommended Action or Procedure**

Follow all SOP's and EFMAP Rules

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- ___
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** March 30, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Cutting of trees and chipping operations, equipment operations moving trees and branches

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| R. Trahan | | Shaw |
| R. Lacson | | SHAW |
| R. McBride | | SHAW |
| | | |
| | | |

Instructions: Conduct a daily safety meeting prior to beginning each day's site activities. Complete form, obtain signatures, and file with the Daily Summary. Follow-up on any noted items and document resolution of any action items.

TASK TITLE: PERFORMED BY:

| PRINT NAME | SIGNATURE | DATE |
|---|---|---|
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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: |
|---|---|---|
| LEVEL | Safe Haven: | JSA Prepared By: |
| | Wind Direction: | Are other crews in area |
| Pre-Job Preparation | Evacuation Route: | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: | New: / Revised: |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Site Cleanup** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** March 31, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Cutting of trees and chipping operations, equipment operations moving trees and branches

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Brooks | | Shaw |
| Chester J Brewer | | Shaw |
| Greg Griswold | | Shaw |
| [illegible] | | Shaw |
| R. Lacson | | Shaw |
| Randy McBride | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Transport Route

Assembly Point:
Gate 10

Supervisor of Work: S. KRITAK

JSA Prepared By: S. KRITAK

Are other crews in area

New: ✓

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

Cutting Trees down in Ponds
Trimming branches
Chipping branches & small stumps

**Site Cleanup**

Transpart trees & branches using BOBCAT and Loader

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip Trip Fall
Chain Saw Safety
Chipper Safety
Equipment Operations

**Supervisors Comments**

**Recommended Action or Procedure**

Follow SOP's and PFMAP Policies

Notify Control Room whenever entering (A.M.) and Leaving (P.M.)

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other Chaps

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- N/A Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other

**HAZARDS/CHEMICALS**
- N/A Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- N/A Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- N/A Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 2, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Cutting of trees and chipping operations, equipment operations moving trees and branches

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| RIVRAHAN | | SHAW |
| R. Lacson | | Shaw |
| Randy McBroom | | SHAW |
| Chester J. Branch | | SHAW |
| Stephen Banks | | SHAW |
| Glee Ekiwood | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Cutting trees and dragging to prep area | |
| Removing branches and cutting trunks into 8' sections | |
| Placing trunks into wooded area using bobcat | |
| Chipping branches and sections of trees under 12" | |
| Site clean up | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall | |
| Equipment Operations-Loader and skid steer | |
| Chain Saw Operations | |
| Chipper Operations | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment | |
| Follow all RFAAP safety rules | |
| Follow all Shaw SOP's | |

| Crew Name Signatures: | R. Tolar<br>R. Lacson | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51** /SWMU 39 **Date:** April 6, 2009

**Project Number: 123461** _____ **Presented by:** Steve Kritak _____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet. BACKFILL OF AREA 51 W/ ON SITE SPOILS CONTINUE CHIPPING & CLEARING AT AREA 39

**Discussion/Comments/Follow-up Actions:** CONTINUE WORKING AS A TEAM AND FOLLOW ALL SOP's & RADFORD REGULATIONS

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| CHRIS GRISWOLD | | Shaw |
| STEPHEN BANKS | | Shaw |
| K. TRAHAN | | Shaw |
| K. LACSON | | Shaw |
| CHESTER J. BRUNIN | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: GATE 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: GATE 10

Supervisor of Work: S. KRITSAK
JSA Prepared By: SAME
Are other crews in area: No

New: X
Revised:

**Job Task**
(What are You Doing)

BACKFILL SWMU 51 WITH SEGREGATED SPOILS MATERIAL
COMPACT MATERIAL W/ BUCKET OF CAT 330

**Site Cleanup**

CONTINUE MOVING TREES TO CHIPPING AREA FROM PONDS
STRIP BRANCHES AND PUT THROUGH CHIPPER
SPREAD TRUNKS AND MULCH IN WOODED AREAS

**Potential Hazards**

EQUIPMENT OPERATIONS
SHARP / CUTTING HAZARDS
SLIP TRIP FALL ; UNEVEN SURFACES
HEAVY LIFTING

**Recommended Action or Procedure**

FOLLOW ALL SHAW SOP'S
FOLLOW ALL RADFORD POLICY ; PROCEDURES

**Audit the Job**
Audit Time:

**Supervisors Comments**

**Supervisor's Initials:**

**Crew Name Signatures:**

JSA Completed at Tailgate Safety Meeting

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work SUMUSI
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51 & 39** **Date:** April 7, 2009

**Project Number: 123461** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** BACKFILL AT SWMU 51 to only 15' bgs. ~~Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.~~ SWMU 39 prepare for Excavation of Ponds and loading into trucks. Prepare ramp into 1st Pond.

**Discussion/Comments/Follow-up Actions:** Extremely windy/cold today watch for slip trip fall hazards and check in w/control room prior to entry into SWMU 39

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| STEPHEN BANKS | Stephen Banks | Shaw |
| Chester J Barnes | Chester J Barnes | Shaw |
| Greg Grigsby | Greg Grigsby | Shaw |
| R Tatum | R Tatum | Shaw |
| R Lacson | R Lacson | shaw |

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# JOB SAFETY ANALYSIS

DATE: 4/7/09
JOB#:
PERMIT#: 123461
ISSUED BY:

**Location of Job** RFAAP - SWMU 39 and SWMU 51
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: Gate 10

Supervisor of Work: S. Kratak
JSA Prepared By: Same
Are other crews in area No

New: X
Revised:

**Job Task**
(What are You Doing)

Prepare entry ramp into SWMU 39 pond A
BACKFILL AT SWMU 51 (10 15' lifts)
Compact at SWMU 51 w/ bucket (only)

**Site Cleanup**

* Work out details of Excavating windrows at ponds.

**Potential Hazards**

Equipment operations
Excavation Safety
Traffic through Plant (Right of way to Explosive Trucks and escorted Vehicles)
Slip Trip Fall
Cold Stress

**Recommended Action or Procedure**

Follow Standard Shaw SOP's
Follow RFAAP Safety Policies

**Audit the Job**
Audit Time:

**Supervisors Comments**

**Supervisor's Initials:**

| Crew Name Signatures: | |
|---|---|
| JSA Completed at Tailgate Safety Meeting | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ✓ Hot Work (Sum 39)
- ✓ Entry Permit (both 51 & 39)
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- ___
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

### Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51 & 39** **Date:**

**Project Number: 123461** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** [redacted]

No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives a[redacted]

[redacted] Excavation at SWMU 39 of Lead Contaminated Soils. Finish removal of fence posts and breaking of Concrete.

**Discussion/Comments/Follow-up Actions:** Check in with Control Room prior to entry into the Incinerator Area

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brinson | | SHAW |
| Stephen Banks | | SHAW |
| Greg Griswold | | SHAW |
| Jeff Hillebrand | | SHAW |
| Randy McBride | | SHAW |
| R. Trahan | | SHAW |
| R. Laesen | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL D

**Safety Access/ Location**

Safe Haven: Gate 10
Wind Direction: N/A
Evacuation Route: Follow Transport Route
Assembly Point: GATE 10

Supervisor of Work: S. KRITAIC
JSA Prepared By: Same
Are other crews in area None

New: X
Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Job Task**
(What are You Doing)

EXCAVATE LEAD SOILS TO 1 FOOT BGS
STOCKPILE SOILS IN "ROWS" NOT PILES
SAMPLE/TEST SUBGRADE W/ XRF
**Site Cleanup**

**Audit the Job**
Audit Time:

**Potential Hazards**

EQUIPMENT OPERATIONS
SLIP TRIP, FALL
HEAVY LIFTING
EXCAVATION SAFETY
OBEY TRAFFIC REGULATIONS ON BASE

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SHAW SOP's
FOLLOW RFAAP RULES & REGULATIONS.

**Supervisor's Initials:**

**Crew Name Signatures:**

**JSA Completed at Tailgate Safety Meeting**

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- X Heavy Objects
- X Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- X Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 9, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures

_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| K. Trahan | K. Trahan | Shaw |
| R. Lacson | R. L | Shaw |
| Chester J. Brinson | Chester J. Brinson | SHAW |
| Randy McMinor | | SHAW |
| Jeff Hilkbrand | | SHAW |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 13, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Benson | | SHAW |
| Raddy Lawson | | Shaw |
| Jeff Hilkbrand | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
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| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** April 15, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| R Larson | | Shaw |
| J. Hiltbrand | | Shaw |
| C. Brinser | | Shaw |
| Gene Gerwood | | Shaw |
| | | |

IL0001357236

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 16, 2009_____

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks | | Shaw |
| Stephen Hillebrand | | Shaw |
| Chester Brinson | | Shaw |
| R. Lacson | | Shaw |
| Eric Griswold | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
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- ___ Acid Suit /Slicker Suit
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- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

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- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
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**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
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- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
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- ___ Sharp Objects
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- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 17, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Charles J. Branson | | Shaw |
| Greg Gibbons | | Shaw |
| R. Larson | | Shaw |
| Steve Barker | | Shaw |
| Jeff Nellenbach | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 20, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| R Lacson | | Shaw |
| C. Brown | | Shaw |
| S. Banks | | Shaw |
| Greg Griswold | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 21, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. BANKS | | Shaw |
| Greg Gasswood | | Shaw |
| R Lacson | | shaw |
| C. BOINSER | | SHAW |
| J. Nillebrand | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** 4/22/09

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Branson | | Shaw |
| S. Banks | | Shaw |
| Otis Grimsley | | Shaw |
| R. Lacson | | Shaw |
| J. Hildebrand | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br><br>LEVEL | **Safety Access/ Location**<br><br>Safe Haven: Gate 10<br><br>Wind Direction: N/A<br><br>Evacuation Route:<br>Follow Transport Route<br><br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br><br>JSA Prepared By: Same<br><br>Are other crews in area RFAAP Production crews<br><br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br><br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | |
|---|---|
| **JSA Completed at Tailgate Safety Meeting** | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** April 23, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. BANKS | | SHAW |
| C. BRINSON | | SHAW |
| J. Hilkbrand | | Shaw |
| R Lacson | | Shaw |
| Steve Griswold | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** 4/24/09

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. Brinson | | Shaw |
| R. Lacson | | Shaw |
| B. Griswold | | Shaw |
| S. Banks | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 27, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| J. Hilliard | | Shaw |
| C. Brinson | | Shaw |
| R. Lacson | | Shaw |
| G. Griswold | | Shaw |
| S. Banks | | Shaw |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** April 28, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. Brinson | | Shaw |
| S. Banks | | Shaw |
| R. Lacson | | Shaw |
| G. Growald | | Shaw |
| J. Hillebrand | | Shaw |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** 4/29/09

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. Branson | | SHAW |
| J. Hilebrand | | Shaw |
| J. Banks | | SHAW |
| R. Larson | | shaw |
| G. Gearwood | | Shaw |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** May 5, 2009

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures
_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:**_____

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks<br>Chester J. Banks | Stephen Banks<br>Chester J. Banks | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 51

Required PPE:

LEVEL D

**Pre-Job Preparation**

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: GATE 10
Wind Direction: N/A
Evacuation Route: follow Transport Route
Assembly Point: GATE 10

Supervisor of Work: S. Krifka
JSA Prepared By: S Krifka
Are other crews in area NO

New: X
Revised:

**Job Task**
(What are You Doing)

ESCORT TRUCKS INTO S/TE
LOAD 2 TRUCKS
ESCORT OUT OF SITE

**Site Cleanup**

SAMPLE SOIL - SWMU 51

**Audit the Job**
Audit Time:

**Potential Hazards**

Slip, Trip, Fall
TRAFFIC SAFETY
EQUIPMENT OPERATIONS

**Supervisors Comments**

**Recommended Action or Procedure**

FOLLOW ALL SHAW SOP's & RADFORD POLICIES

**Supervisor's Initials:**

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- ___ Hot Work
- ___ Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air
- ___ Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- ___ Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- ___ Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: _____

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal**____ **Date:** May 11, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Britton | | Shaw |
| Stephen Brooks | | Shaw |
| Greg Gelwood | | Shaw |
| Jeff Hilliard | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE: May 11, 2009
JOB#: 123461
PERMIT#: N/A
ISSUED BY: S. Kritak

| | | |
|---|---|---|
| **Location of Job** (Unit/Location on Project): ~~SEAD WEST~~ SWMU 39 - RFAAP | | |
| Required PPE: LEVEL | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
| | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal**___ **Date:** May 13, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Brooks | | Shaw |
| C. Brinser | | Shaw |
| Greg Greenwood | | Shaw |
| J. Hilkbrand | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~SITE WEST~~ SWMU 39

| | | |
|---|---|---|
| Required PPE:<br>LEVEL D | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
| | Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** May 15, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Bayis | | SHaw |
| J. Hillebran | | Shaw |
| C. Bryson | | Shaw |
| Greg Gilliwood | | Shaw. |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

| | | |
|---|---|---|
| **Location of Job** (Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39 | | |
| Required PPE:<br>LEVEL D | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
| | Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews<br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task** (What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** May 18, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| G. Bertasso | | Shaw |
| Stephan Banks | | Shaw |
| Greg Grinnup | | Shaw |
| Jeff Hilbrand | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal**___ **Date:** May 19, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. Banks | | Shaw |
| C. Brinser | | Shaw |
| Bill Griswold | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
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- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
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**WELDING**
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- ___ Combustibles
- ___ Spark Containment
- ___ Shields
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- ___ Fire Blanket
- ___ Fire Watch
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- ___ Other _____

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- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

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- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
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- X Extension Cord Inspection
- ___ Other _____

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- ___ Load Chart
- ___ Angle
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- ___ Chainfall
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- ___ Fall Potential
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- ___ Other _____

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- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

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Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** May 20, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| C. BRINSON | | Shaw |
| S. Banks | | Shaw |
| Greg Gregory | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br><br>LEVEL | **Safety Access/ Location**<br><br>Safe Haven: Gate 10<br><br>Wind Direction: N/A<br><br>Evacuation Route:<br>Follow Transport Route<br><br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br><br>JSA Prepared By: Same<br><br>Are other crews in area RFAAP Production crews<br><br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br><br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| | | |
|---|---|---|
| **Crew Name Signatures:** | | |
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 1 & 2, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banics | | Shaw |
| | | Shaw |
| Bob Griswold | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br>LEVEL | **Safety Access/ Location**<br>Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route:<br>Follow Transport Route<br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br>JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews<br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** June 3, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 51/39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chet Brinser | | Shaw |
| Stephen Banks | | Shaw |
| Bob Gerwood | | Shaw |
| Jeff Hillebrand | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 29, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Jeff Hibbard | | Shaw |
| S. Banks | | Shaw |
| C Gilsworth | | Shaw |
| C. Brinser | Chet Brinser | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 4, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 5 ~~39~~, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| CHET BETTSER | | Shaw |
| Stephen Banks | | Shaw |
| Greg Gremwood | | Shaw |
| Jeff Nelson | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| | | |
|---|---|---|
| Required PPE:<br>LEVEL | **Safety Access/ Location**<br>Safe Haven: Gate 10<br>Wind Direction: N/A<br>Evacuation Route:<br>Follow Transport Route<br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br>JSA Prepared By: Same<br>Are other crews in area RFAAP Production crews<br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

***Daily Safety Meeting***

**Project Name: Radford Army Arsenal** **Date:** June 8, 2009

**Project Number: 123461.** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks:** Excavation and load out of non hazardous soils from the Former Lead Furnace Area for shipment to the landfill. Sampling of soils and analysis using XRF and regrading of area when completed.

**Discussion/Comments/Follow-up Actions:** Follow all RFAAP safety protocols trucks will be weighed at scales behind shipping and receiving by Shaw.

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| CHET BRINSON | | Shaw |
| CRAIG GRISWOLD | | Shaw |
| Jeff Hilderbrand | | Shaw |
| STEPHEN BANKS | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):FLFA

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of Soils at FLFA** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Regrading of areas when completed** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| **JSA Completed at Tailgate Safety Meeting** | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 11, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | |
| Stephen Banks | | |
| Greg Gatewood | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | |
|---|---|
| New: | XXXX |
| Revised: | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** 6/12/09

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | Shaw |
| Greg Bridgewood | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 22, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brinson | | Shaw |
| Gene Garwood | | Shaw |
| | | |
| | | |
| | | |

982

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Excavation of sediment ponds | |
| Stockpiling of material | |
| Sampling of soils using XRF | |
| Backfill and compaction of ponds | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall | |
| Equipment Operations-Loader and Excavator | |
| Traffic during Escorting of disposal trucks | |
| Heavy lifting | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment | |
| Follow all RFAAP safety rules | |
| Follow all Shaw SOP's | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** June 23, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Christopher J. Bellasai | | Shaw |
| Greg Gregorio | | Shaw |
| | | |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

| **Location of Job** (Unit/Location on Project):STA 1 WEST | | |
|---|---|---|
| Required PPE:<br><br>LEVEL | **Safety Access/ Location**<br><br>Safe Haven: Gate 10<br><br>Wind Direction: N/A<br><br>Evacuation Route: Follow Transport Route<br><br>Assembly Point: Gate 10 | Supervisor of Work: Steve Kritak<br><br>JSA Prepared By: Same<br><br>Are other crews in area RFAAP Production crews<br><br>New: XXXX<br>Revised: |
| Pre-Job Preparation<br><br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | | |

| **Job Task** (What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds**<br>**Stockpiling of material**<br>**Sampling of soils using XRF**<br>**Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall**<br>**Equipment Operations-Loader and Excavator**<br>**Traffic during Escorting of disposal trucks**<br>**Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment**<br>**Follow all RFAAP safety rules**<br>**Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 24, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester S. Bryson | | Shaw |
| J. Wilson | | Shaw |
| S. Banks | | Shaw |
| Greg Bryson | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

Required PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | | |
|---|---|---|
| New: | XXXX | |
| Revised: | | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
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- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
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- ___ Fresh Air
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- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** June 30, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Jeff Hildebrand | | Shaw |
| Chester S. Bottser | | Shaw |
| S. Banks | | Shaw |
| Greg Gaylord | | Shaw |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39 (BACKFILL)

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 2, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Greg Gerwood | | Shaw |
| S. Banks | | Shaw |
| Chet Bretsch | | Shaw |
| Jeff Nilsbrand | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** July 7, 2009

**Project Number: 123461.24000002** _____ **Presented by:** Steve Kritak _____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** _____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Bruns | | Shaw |
| Greg Bridgewood | | Shaw |
| Stephen Burke | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** July 9, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** and traffic regulations.

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Bronson | | Shaw |
| Stephen Bandis | | Shaw |
| Bud Brown | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 13, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Gale Gatewood | | Shaw |
| Chester Jefferson | | Shaw |
| Stephen Bradley | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 21, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewster | | Shaw |
| Greg Greenwood | | Shaw |
| Stephen Brady | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate | | |
| Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** July 22, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewer | | Shaw |
| Greg Gaskamp | | Shaw |
| S. Banks | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 23, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~29~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewer | | Shaw |
| Greg Gatewood | | Shaw |
| S. Banks | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 24, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL >10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**
EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Beaver | | Shaw |
| Greg Gragwood | | Shaw |
| S. Banks | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** July 29, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of ~~lead~~ contaminated soils ~~impounds~~ located at SWMU 51 ~~29~~, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete** BACKFILL ONLY

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Benson | | Shaw |
| Greg Greenwood | | Shaw |
| Steven Banks | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

992

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** 7-15-09

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester Brewer | | S |
| Stephen Jones | | S |
| Greg Brewer | | S |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Excavation of sediment ponds<br>Stockpiling of material<br>Sampling of soils using XRF<br>Backfill and compaction of ponds | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall<br>Equipment Operations-Loader and Excavator<br>Traffic during Escorting of disposal trucks<br>Heavy lifting | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment<br>Follow all RFAAP safety rules<br>Follow all Shaw SOP's | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
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- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** July 1, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Jeff Hilliard | | Shaw |
| J. Burton | | Shaw |
| C. Ellsworth | | Shaw |
| C. Brewster | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** June 26, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | Shaw |
| Stephen Banks | | Shaw |
| Jeff Hilliard | | Shaw |
| Greg Griswold | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** May 21, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| L. Brinson | | Shaw |
| S. Banks | | Shaw |
| Greg Griswold | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** July 28, 2009

**Project Number: 123461.~~24000002~~** 62000002 ___ **Presented by:** Steve Kritak ___

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL >10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~38~~, loading material into trucks for disposal, backfill and compaction of ~~pond~~s after confirmatory sampling is complete**

EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** ___

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Bayes | | Shaw |
| J. Alleman-J | | Shaw |
| Greg Griswold | | Shaw |
| Cheri Brunser | | Shaw |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** July 27, 2009

**Project Number: 123461.~~24000002~~ 62000002** ___ **Presented by:** Steve Kritak ___

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at ~~SWMU~~ FLFA ~~39~~, loading material into trucks for disposal, backfill and compaction of ~~ponds~~ after confirmatory sampling is complete**

EXCAVATION

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** ___

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks | | Shaw |
| J. Hellebrand | | Shaw |
| Gene Gregwood | | Shaw |
| Chet Brinser | | Shaw |
| | | |

007

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation<br>1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Evacuation Route: Follow Transport Route<br>Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** Aug. 17, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | SHAW |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** Aug. 18, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Benser | | Shaw |
| Steven Banks | | Shaw |
| | | |
| | | |
| | | |

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

Shaw Group Inc.

**ion of Job**
(Location on Project):STA 1 WEST

quired PPE:

LEVEL

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

**Safety Access/ Location**

Safe Haven: Gate 10

Wind Direction: N/A

Evacuation Route:
Follow Transport Route

Assembly Point: Gate 10

Supervisor of Work: Steve Kritak

JSA Prepared By: Same

Are other crews in area RFAAP Production crews

| | |
|---|---|
| New: | XXXX |
| Revised: | |

| **Job Task**<br>(What are You Doing) | **Audit the Job**<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate | | |
| Safety Meeting | | |

# AFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

_____ _____

ı apply to the job, then review with the work crew.

**(PPE)**

_____ X Type of Gloves
_____ X Composition of Gloves
_____ Special Purpose Gloves
_____ Tyvek Suit
_____ Acid Suit /Slicker Suit
_____ Rubber Boots
_____ Mono Goggles (vented/non-vented)
_____ X Face Shield
_____ Respirator
_____ Fresh Air
_____ X Ear Protection
_____ Safety Harness
_____ Burning Goggles
_____ X Other _____

**TOOLS**

_____ X Current Inspection
_____ X Proper Tools for the Job
_____ X Good Tool Condition
_____ X Qualifications
_____ Other _____

**EMERGENCY EQUIPMENT**

_____ X Fire Extinguishers
_____ Safety Shower
_____ X Evacuation Route
_____ Other _____

**ACCESS**

_____ Scaffold (properly inspected)
_____ Ladder (Tied off)
_____ Manlift
_____ Personnel Basket (inspected & approved)
_____ Operator Training
_____ Special Provisions
_____ Other

**WELDING**

_____ Flashburns
_____ Combustibles
_____ Spark Containment
_____ Shields
_____ Grounding
_____ Water Hose
_____ Fire Extinguisher
_____ Fire Blanket
_____ Fire Watch
_____ Sewer Covers
_____ Other _____

**OVERHEAD WORK**

_____ X Barricades
_____ Signs
_____ Hole Cover
_____ Handrail
_____ Other _____

**ELECTRICAL**

_____ Locked & Tagged out
_____ Try Start/Stop Switch
_____ X GFCI Test
_____ X Assured Grounding
_____ X Extension Cord Inspection
_____ Other _____

**LIFTING**

_____ Forklift
_____ Cherry Picker
_____ Load Chart
_____ Angle
_____ Crane
_____ Chainfall
_____ X Proper Rigging Practices
_____ X Manual Lifting
_____ X Condition of Equipment
_____ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**

_____ Electrical Shock
_____ Heat Stress
_____ Heavy Objects
_____ Hot/Cold Surf. Or Mat.
_____ Inadequate Lighting
_____ Line Breaking
_____ X Noise
_____ Poor Access/Egress
_____ Sharp Objects
_____ Other _____

**HAZARDS/CHEMICALS**

_____ Chemical Burn Shin/Eyes
_____ Flammable
_____ Ingestion
_____ Inhalation
_____ Skin Contamination

**HAZARDS/BODY**

_____ Fall Potential
_____ Pinch Points
_____ Slip-Trip Potential
_____ Other _____

**OTHER WORK IN AREA**

_____ Others Working Overhead
_____ Type Work Others Doing
_____ PPE Due to Other Work
_____ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**___ **Date:** Aug. 19, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Bethusen | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** Aug. 20, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Christopher J. Bowser | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project):STA 1 WEST

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | New: XXXX<br>Revised: |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** **Date:** August 24, 2009

**Project Number: 123461.24000002** **Presented by:** Steve Kritak

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils [redacted] located at [redacted] FLFA loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Barns | | Shaw |
| Chester J. Brinsen | | Shaw |
| Steven Kritak | | Shaw |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

| | | | |
|---|---|---|---|
| **Location of Job** (Unit/Location on Project): ~~[illegible]~~ FLFA | | | |
| Required PPE: LEVEL D | **Safety Access/ Location** | Supervisor of Work: Steve Kritak | |
| | Safe Haven: Gate 10 | JSA Prepared By: Same | |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews | |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX | |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | Revised: | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK. _____

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal** ___ **Date:** August 25, 2009

**Project Number: 123461.24000002** ___ **Presented by:** Steve Kritak ___

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures

_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils [redacted] located at [redacted] FLFA; loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols** ___

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Stephen Banks | | Shaw |
| Chester J. Brinser | | Shaw |
| Steven Kritak | | Shaw |
| | | |
| | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~[redacted]~~ FLFA

| Required PPE: | Safety Access/ Location | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| Job Task (What are You Doing) | Audit the Job<br>Audit Time: |
|---|---|
| Excavation of sediment ponds | |
| Stockpiling of material | |
| Sampling of soils using XRF | |
| Backfill and compaction of ponds | |
| **Potential Hazards** | **Supervisors Comments** |
| Slip, Trip and Fall | |
| Equipment Operations-Loader and Excavator | |
| Traffic during Escorting of disposal trucks | |
| Heavy lifting | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| Follow all safety precautions, proper PPE and use of equipment | |
| Follow all RFAAP safety rules | |
| Follow all Shaw SOP's | |

| Crew Name Signatures: | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

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Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

## Confined Space

Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford Army Arsenal**____ **Date:** Aug. 31, 2009

**Project Number: 123461.24000002**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_x_safety glasses, hard hat, safety boots
_x_site safety plan review and location
_x_equipment and machinery familiarization
_n/a_employee Right-To-Know/MSDS location
_n/a_open pits, excavations, and site hazards
_x_vehicle safety and driving/road conditions
_x_portable tool safety and awareness
_x_overhead utility locations and clearance
_x_first aid, safety, and PPE location
_x_sharp object, rebar, and scrap metal hazards
_x_safety is everyone's responsibility
_n/a_latex gloves inner/nitrile gloves outer
_n/a_excavation/trenching inspections/documentation
_n/a_full face respirators with proper cartridges
_n/a_upgrade to level c at: PID (___ eV ) >___ ppm
_n/a_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%
_x_slips, trips, and falls
_x_directions to hospital
_x_anticipated visitors
_x_electrical ground fault
_x_public safety and fences
_x_excavator swing and loading
_x_orderly site and housekeeping
_x_smoking in designated areas
_x_leather gloves for protection
_x_effects of the night before
_x_vibration related injuries
_x_fire extinguisher locations
_x_eye wash station locations
_x_decontamination procedures
_x_daily work scope
_x_emergency protocol
_x_parking and laydown
_x_hot work permits
_x_strains and sprains
_x_noise hazards
_x_no horseplay
_x_heat and cold stress
_x_backing up hazards
_x_accidents are costly
_x_dust and vapor control
_x_refueling procedures
_n/a_confined space entry
_x_flying debris hazards

**Tasks: Excavation of lead contaminated soils in ponds located at SWMU 39, loading material into trucks for disposal, backfill and compaction of ponds after confirmatory sampling is complete**

**Discussion/Comments/Follow-up Actions: Follow all RFAAP safety protocols**_____

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| Chester J. Brewer | | Shaw |
| Stephen Banks | | Shaw |
| | | |
| | | |
| | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

DATE:
JOB#:
PERMIT#:
ISSUED BY:

**Location of Job**
(Unit/Location on Project): ~~STA 1 WEST~~ SWMU 39

| Required PPE: | **Safety Access/ Location** | Supervisor of Work: Steve Kritak |
|---|---|---|
| LEVEL D | Safe Haven: Gate 10 | JSA Prepared By: Same |
| | Wind Direction: N/A | Are other crews in area RFAAP Production crews |
| Pre-Job Preparation | Evacuation Route: Follow Transport Route | New: XXXX / Revised: |
| 1. Fill out JSA<br>2. Review JSA (EVERYONE)<br>3. Sign JSA (EVERYONE) | Assembly Point: Gate 10 | |

| **Job Task** (What are You Doing) | **Audit the Job** Audit Time: |
|---|---|
| **Excavation of sediment ponds** | |
| **Stockpiling of material** | |
| **Sampling of soils using XRF** | |
| **Backfill and compaction of ponds** | |
| **Potential Hazards** | **Supervisors Comments** |
| **Slip, Trip and Fall** | |
| **Equipment Operations-Loader and Excavator** | |
| **Traffic during Escorting of disposal trucks** | |
| **Heavy lifting** | |
| **Recommended Action or Procedure** | **Supervisor's Initials:** |
| **Follow all safety precautions, proper PPE and use of equipment** | |
| **Follow all RFAAP safety rules** | |
| **Follow all Shaw SOP's** | |

| **Crew Name Signatures:** | | |
|---|---|---|
| JSA Completed at Tailgate Safety Meeting | | |

Shaw The Shaw Group Inc.

# JOB SAFETY ANALYSIS

**DATE:**
**JOB#:**
**PERMIT#:**
**ISSUED BY:**

**SUPERVISION/FOREMAN** _____ _____

Consider the following and check the items which apply to the job, then review with the work crew.

**PERMITS**
- ___ Required
- ___ Cold Work
- X Hot Work
- X Entry Permit
- ___ All Conditions Met
- ___ Signed Off When Complete
- ___ Other _____

**PERSONAL PROTECTIVE EQUIP. (PPE)**
- X Type of Gloves
- X Composition of Gloves
- ___ Special Purpose Gloves
- ___ Tyvek Suit
- ___ Acid Suit /Slicker Suit
- ___ Rubber Boots
- ___ Mono Goggles (vented/non-vented)
- X Face Shield
- ___ Respirator
- ___ Fresh Air
- X Ear Protection
- ___ Safety Harness
- ___ Burning Goggles
- X Other _____

**TOOLS**
- X Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- X Qualifications
- ___ Other _____

**EMERGENCY EQUIPMENT**
- X Fire Extinguishers
- ___ Safety Shower
- X Evacuation Route
- ___ Other _____

**ACCESS**
- ___ Scaffold (properly inspected)
- ___ Ladder (Tied off)
- ___ Manlift
- ___ Personnel Basket (inspected & approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other

**WELDING**
- ___ Flashburns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other _____

**OVERHEAD WORK**
- X Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other _____

**ELECTRICAL**
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- X GFCI Test
- X Assured Grounding
- X Extension Cord Inspection
- ___ Other _____

**LIFTING**
- ___ Forklift
- ___ Cherry Picker
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chainfall
- X Proper Rigging Practices
- X Manual Lifting
- X Condition of Equipment
- ___ Operator Certificate

**HAZARDS (ENVIRONMENTAL)**
- ___ Electrical Shock
- ___ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surf. Or Mat.
- ___ Inadequate Lighting
- ___ Line Breaking
- X Noise
- ___ Poor Access/Egress
- ___ Sharp Objects
- ___ Other _____

**HAZARDS/CHEMICALS**
- ___ Chemical Burn Shin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contamination

**HAZARDS/BODY**
- ___ Fall Potential
- ___ Pinch Points
- ___ Slip-Trip Potential
- ___ Other _____

**OTHER WORK IN AREA**
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other _____

**Confined Space**
Know the Following:

- Possible hazards within the confined space
- First signs of exposure
- How to summons help
- How to track personnel
- Entering and exiting the confined space
- Maintain contact with all entrants by voice or visual
- Do not attempt to rescue unless you are a part of a coordinated effort
- Remain at entry point assume no duties with take you from there.

SUPERVISOR/FOREMAN RECOMMENDATION: ASK FOR HELP IF YOU NEED IT OR ARE NOT 100% SURE ABOUT YOUR TASK.

## *Daily Safety Meeting*

**Project Name: Radford SWMU 51**_____ **Date:** 2/18/09

**Project Number: 123461**_____ **Presented by:** Steve Kritak_____

**Check the Topics/Information Reviewed:**

_X_safety glasses, hard hat, safety boots
_X_site safety plan review and location
_X_equipment and machinery familiarization
__employee Right-To-Know/MSDS location
_X_open pits, excavations, and site hazards
_X_vehicle safety and driving/road conditions
_X_portable tool safety and awareness
_X_overhead utility locations and clearance
_X_first aid, safety, and PPE location
__sharp object, rebar, and scrap metal hazards
_X_safety is everyone's responsibility
__latex gloves inner/nitrile gloves outer
_X_excavation/trenching inspections/documentation
__full face respirators with proper cartridges
_X_upgrade to level c at: PID (___ eV ) >_10_ ppm
_X_work stoppage at: PID(___ eV) >___ ppm, % LEL > 10%

_X_slips, trips, and falls
_X_directions to hospital
__anticipated visitors
__electrical ground fault
_X_public safety and fences
_X_excavator swing and loading
_X_orderly site and housekeeping
_X_smoking in designated areas
_X_leather gloves for protection
__effects of the night before
__vibration related injuries
_X_fire extinguisher locations
_X_eye wash station locations
_X_decontamination procedures

_X_daily work scope
_x_emergency protocol
__parking and laydown
_X_hot work permits
_X_strains and sprains
_X_noise hazards
_X_no horseplay
_X_heat and cold stress
_X_backing up hazards
_X_accidents are costly
_X_dust and vapor control
_X_refueling procedures
__confined space entry
__flying debris hazards

**Tasks:** Excavation of contaminated Sludge and direct load into trucks for transportation to disposal facility. Escort of trucks required by Arsenal security and No Smoking, lighters or matches allowed inside gates. Stop for Arsenal trucks when hauling explosives and stay away from magazine buildings on either side of our site by 50 feet.

**Discussion/Comments/Follow-up Actions:** Rainy weather, slippery surfaces, Truck traffic & Equipment Operations

*Note: Use the back of this sheet if necessary for daily task description and discussion*

| NAME | SIGNATURE | COMPANY |
|---|---|---|
| S. KRITAK | Skritak | Shaw |
| S. BANKS | Steve Banks | Shaw |
| CHET BRAPSON | Chet Brapson | Shaw |
| GREG GRISWOLD | Greg Griswold | Shaw |
| | | |



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

| | | | |
|---|---|---|---|
| UNIT NO: | 100600 | WEEK ENDING: | 1/9/09 |
| UNIT MILES: | 97151 | CURRENT JOB NO: | 123461 |
| INSPECTED BY: | S KRITAR | FUEL FRONT: | — |
| EMP. NUMBER: | 438449 | FUEL REAR: | — |

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | N | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | — | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: Unit is stained on floor boards and dash.
LOUD RATTLE FROM Exhaust system occurs frequently.
Exterior O.K.

INSPECTORS SIGNATURE: Steve Kritar  DATE: 1/9/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

| | | | |
|---|---|---|---|
| UNIT NO: | 101069 | WEEK ENDING: | 1/9/09 |
| UNIT MILES: | 46800 | CURRENT JOB NO: | 23461 |
| INSPECTED BY: | S. KRITAK | FUEL FRONT: | — |
| EMP. NUMBER: | 438449 | FUEL REAR: | — |

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | N | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | — | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: Small dent on right side rear chrome bumper

INSPECTORS SIGNATURE: Sturm Kritak  DATE: 1/9/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 46950
INSPECTED BY: S. KRITAK
EMP. NUMBER: 438449

WEEK ENDING: 1/19/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

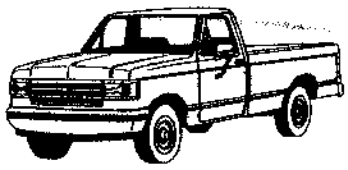
N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| | Unit Fueled Yes / No | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

WAS UNIT SERVICED Y (N)  DATE  MILES

COMMENTS: No Problems

INSPECTORS SIGNATURE: Steve Kritak  DATE: 1/19/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 100600
UNIT MILES: 97720
INSPECTED BY: S. KRITIKL
EMP. NUMBER: 438449

WEEK ENDING: 1/19/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. **Yes / No** | O | Transmission Oil & Drive Line |
| | Unit Fueled **Yes / No** | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer-Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| N | | |

COMMENTS: No Problems

INSPECTORS SIGNATURE: Steven Kritikl  DATE: 1/19/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 10/069
UNIT MILES: 47647 2.23.09
INSPECTED BY: S Bates
EMP. NUMBER: 743826

WEEK ENDING: 2-20-09
CURRENT JOB NO:
FUEL FRONT: 7 1/2
FUEL REAR: N/A

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| 7 1/2 | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | N | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

**WAS UNIT SERVICED (Y) N** **DATE** **MILES**

COMMENTS:

(1) Small Hole in Muffler

(2) Small crack windshield

**INSPECTORS SIGNATURE:** [signature] **DATE:** 2-23-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 100600
UNIT MILES: 99096
INSPECTED BY: SCRITAK
EMP. NUMBER: 438449

WEEK ENDING: 2/20/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| | Unit Fueled Yes / No | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer-Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

INSPECTORS SIGNATURE: [signature] DATE: 2/20/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 1006010
UNIT MILES: 98440
INSPECTED BY: S. KREMAK
EMP. NUMBER: 438449

WEEK ENDING: 2/20/09
CURRENT JOB NO: 123461
FUEL FRONT: 1/
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler RATTLES |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers See note | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | N/A | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: Windshield has crack across bottom occurred over weekend while truck was parked

INSPECTORS SIGNATURE: S Kmtak  DATE: 2/16/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 97244
INSPECTED BY: S BANKS
EMP. NUMBER: 43 8326

WEEK ENDING: 2/20/09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

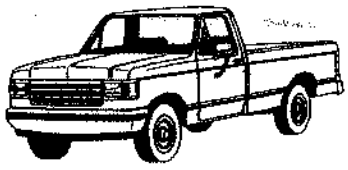
**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| 1/4 | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | N | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

**WAS UNIT SERVICED (Y) / N** **DATE** **MILES**

COMMENTS:
VEHICLE WAS JUST SERVICED ON 2-12-09
(N) SMALL CRACK IN WIND SHIELD
(N) SMALL HOLE IN EXHAUST PIPE

**INSPECTORS SIGNATURE:** S Banks **DATE:** 2-16-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 48024
INSPECTED BY: Chris Stinson
EMP. NUMBER: 1193219

WEEK ENDING: 3-6-09
CURRENT JOB NO: 123461
FUEL FRONT:
FUEL REAR: X

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. **Yes / No** | O | Transmission Oil & Drive Line |
| O | Unit Fueled **Yes / No** | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:
CRACK IN WINDSHIELD
NEED A NEW ONE

INSPECTORS SIGNATURE: [signature]  DATE: 3-5-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 100600
UNIT MILES: 995888
INSPECTED BY: S Kvitek
EMP. NUMBER: 438449

WEEK ENDING: 3/06/09
CURRENT JOB NO: 123461
FUEL FRONT: \
FUEL REAR: \

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE **C** = COMMENTS **O** = OKAY **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| | Unit Fueled Yes / No | | Radiator / Cooling System |
| | Air Conditioner / Heater | | Exhaust / Muffler |
| | Battery / Starter / Horn | | Front Axle / Steering |
| | Lights, Head-Tail-Turn-Stop-Emer. | | Suspension System |
| | Ins. Card & Accident Report Kit | | Spare Tire |
| | Current Registration, Plates | | Jack & Lug Wrench |
| | Service Brakes | | Tires / Wheels / Rims |
| | Parking Brakes | | Frame / Bumpers |
| | Windshield Wipers / Washers | | Coupling Devices |
| | Mirrors-Inside-Outside | | Trailer Electrical Connector |
| | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

WAS UNIT SERVICED Y / (N) DATE MILES

COMMENTS: Scheduled for service early next week.

INSPECTORS SIGNATURE: S Kvitek DATE: 3/3/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101 & 09
UNIT MILES: 49257
INSPECTED BY: [illegible]
EMP. NUMBER: 147229

WEEK ENDING: 3-10-09
CURRENT JOB NO: _____
FUEL FRONT: _____
FUEL REAR: _____

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | C | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | C | Radiator / Cooling System |
| C | Air Conditioner / Heater | C | Exhaust / Muffler |
| C | Battery / Starter / Horn | O | Front Axle / Steering |
| C | Lights, Head-Tail-Turn-Stop-Emer. | C | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| C | Service Brakes | O | Tires / Wheels / Rims |
| C | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| C | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|

COMMENTS: crack in windshield
hole in muffler

INSPECTORS SIGNATURE: [signature] DATE: 3-10-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 10169
UNIT MILES: 148414
INSPECTED BY: Grimwood
EMP. NUMBER: 119206

WEEK ENDING: 3-13-07
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: Crack in windshield.
Hole in muffler.

INSPECTORS SIGNATURE: [signature] DATE: 3-13-07



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 49960
INSPECTED BY: [illegible]
EMP. NUMBER: 1192206

WEEK ENDING: 3-24-09
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

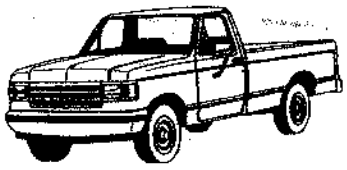
**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: CRACK IN WINDSHIELD
HOLE IN MUFFLER

INSPECTORS SIGNATURE: [signature]  DATE: 4-24-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101669
UNIT MILES: 48913
INSPECTED BY: Eric Grossard
EMP. NUMBER: 1122609

WEEK ENDING: 3-27-09
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| N | Unit Washed, Interior Cleaned. Yes / No | C | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: crack in windshield lr side.
hole in muffler.

INSPECTORS SIGNATURE: [signature]  DATE: 3-27-09.

Col 330 49850

101669 48950

101495 100600



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 50,452
INSPECTED BY: C. Brown
EMP. NUMBER: 1176271

WEEK ENDING: 5/8/09
CURRENT JOB NO:
FUEL FRONT: Full
FUEL REAR: NONE

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled (Yes / No) | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

INSPECTORS SIGNATURE: Chas A J Brown  DATE: 5/8/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 131069
UNIT MILES: 50865
INSPECTED BY: Grimsrud
EMP. NUMBER: 119261

WEEK ENDING: 5-22-09
CURRENT JOB NO:
FUEL FRONT:
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

**N / A** = NOT APPLICABLE  **C** = COMMENTS  **O** = OKAY  **N** = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. Yes / No | O | Transmission Oil & Drive Line |
| O | Unit Fueled Yes / No | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | N/A | Coupling Devices |
| O | Mirrors-Inside-Outside | N/A | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | N/A | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS: CRACK IN WINDSHIELD.
HOLE IN MUFFLER.

INSPECTORS SIGNATURE: [signature] DATE: 5-22-09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 50332
INSPECTED BY: C. Bowser
EMP. NUMBER: 11765971

WEEK ENDING: 5/15/09
CURRENT JOB NO:
FUEL FRONT: 1/2 Tank
FUEL REAR: None

*For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483*

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | Yes / No | | |
|---|---|---|---|---|
| O | Unit Washed, Interior Cleaned. | (Yes) / No | O | Transmission Oil & Drive Line |
| N | Unit Fueled | | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | | O | Suspension System |
| O | Ins. Card & Accident Report Kit | | O | Spare Tire |
| O | Current Registration, Plates | | O | Jack & Lug Wrench |
| O | Service Brakes | | O | Tires / Wheels / Rims |
| O | Parking Brakes | | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | | O | Coupling Devices |
| O | Mirrors-Inside-Outside | | O | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | | Other, Please Enter Comments Below |

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

Fueled 5/13/09

INSPECTORS SIGNATURE: Chuck Bowser  DATE: 5/15/09



Shaw Environmental and Infrastructure, Inc — Equipment Group

# WEEKLY VEHICLE INSPECTION

UNIT NO: 101069
UNIT MILES: 57591
INSPECTED BY: C. Beaver
EMP. NUMBER: 176271

WEEK ENDING: 6/13/09
CURRENT JOB NO:
FUEL FRONT: Full
FUEL REAR:

***For Authorized Repairs On Donlen Vehicles, Call 1-800-323-1483***

**RETAIN THESE FORMS ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL**

N / A = NOT APPLICABLE  C = COMMENTS  O = OKAY  N = NEEDS ATTENTION

| | | | |
|---|---|---|---|
| O | Unit Washed, Interior Cleaned. (Yes / No) | O | Transmission Oil & Drive Line |
| O | Unit Fueled | O | Radiator / Cooling System |
| O | Air Conditioner / Heater | O | Exhaust / Muffler |
| O | Battery / Starter / Horn | O | Front Axle / Steering |
| O | Lights, Head-Tail-Turn-Stop-Emer. | O | Suspension System |
| O | Ins. Card & Accident Report Kit | O | Spare Tire |
| O | Current Registration, Plates | O | Jack & Lug Wrench |
| O | Service Brakes | O | Tires / Wheels / Rims |
| O | Parking Brakes | O | Frame / Bumpers |
| O | Windshield Wipers / Washers | O | Coupling Devices |
| O | Mirrors-Inside-Outside | O | Trailer-Electrical Connector |
| O | Engine Oil, Oil Pressure | | Other, Please Enter Comments Below |

Yes / No

| WAS UNIT SERVICED Y / N | DATE | MILES |
|---|---|---|
| | | |

COMMENTS:

INSPECTORS SIGNATURE: Chet Beaver  DATE: 6/12/09

EQUIP. NO. 55674

EQUIP. TYPE CAT 330

ENDING HRS. 4850



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***



WEEK ENDING 1/19/09

SUPERVISOR KRITAK

LOCATION Radford, Va.

| SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|
| | | O | O | O | O | O |

A=ADD O=OKAY C=COMMENTS

ITEM

1 Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc.
2 Check Hydraulic Oil Level, Inspect The Cap And Vent.
3 Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc.
4 Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators)
5 Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only)
6 Check For Leaks Of Any Kind, I.E., Oil Or Coolant.
7 Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc.
8 Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc.
9 Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc.
10 Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc.
11 Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc.
12 Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge.
Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items.
Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks.
13 Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas.
Check Grab Handles And Step Treads, Etc.
14 Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc.
15 Look Under The Machine For Any Loose Or Hanging Objects, Leaks
Or Anything Out Of The Ordinary.
16 Check Fuel Level, Fill Tank Prior To Beginning Operations.
17 **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links,**
**Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease**
**Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.**
18 Check Breathing Air System ( If Used ) Make Sure Bottle Is Full
And Mask / Hose Assembly Is Clean And In Good Working Condition.
19 **Ensure The Presence Of The Operations / Maintenance Manual.**

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

Please report any items in need of immediate attention.

**COMMENTS:** Please use line number and be specific. No Problems, machine only RUN 10 hrs for entire week

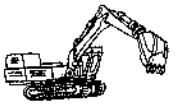
**Signature:** Steve Kritak **Employee Number:** 438449

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 240-10

EQUIP. TYPE JD 200

ENDING HRS. 2376



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 4/3/09

SUPERVISOR S. KRITAK

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | | O | O | O | O |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | | C | C | C | C |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | | C | C | C | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | | O | O | O | O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | | | | | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | | | | | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

NO. 11 - WINDSHIELD WIPER DOESN'T WORK

NO. 12 - VERY DIRTY

Employee Number: 176271

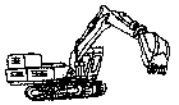
Signature: Chad Brown

*THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.*

EQUIP. NO. 55674

EQUIP. TYPE 330 HOE

ENDING HRS. 4925



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 4/10/09

SUPERVISOR S. KRITAK

LOCATION RADFORD VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | | O | | | |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | | O | | | |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | | O | | | |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | | O | | | |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | | O | | | |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | | O | | | |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | | O | | | |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | | O | | | |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | | O | | | |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | | O | | | |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | | O | | | |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | | O | | | |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | | O | | | |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | | O | | | |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | | O | | | |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | | | | | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | | | | | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

**Employee Number:** 117627

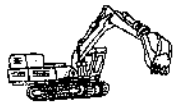
**Signature:**

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE TRACK HOE

ENDING HRS. 4960





Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

WEEK ENDING 4/24/09

SUPERVISOR S. KERTOSH

LOCATION RADFORD VA

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | N/A | N/A | N/A | N/A | N/A |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | O | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | O |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O<br>O | O<br>O | O<br>O | O<br>O | O<br>O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | N/A |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | O | O |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | O | O | O | O | O |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

**Employee Number:**

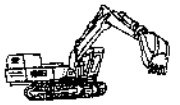
**Signature:**

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE TRACK HOE

ENDING HRS. 4970



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/1/09

SUPERVISOR S Keitsch

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | | |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | | |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | | |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | | |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | N/A | N/A | N/A | N/A | N/A |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | | |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | | |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | | |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | | |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | | |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | | |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | | |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | | |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | | |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | A | O | O | | |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

Monday/ grease Machine Line 17

**Employee Number:** 117687

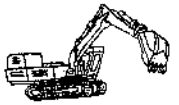
**Signature:**

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE Track Hoe

ENDING HRS. 4970



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/8/09

SUPERVISOR S. Kellett

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | O | O |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | O | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | O |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | O | O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | N/A |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | O | O |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | O | O | O | O | O |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

**Employee Number:** 117627

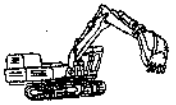
**Signature:** Chris J Bain

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE Track Hoe

ENDING HRS. 4982



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/15/09

SUPERVISOR S. Keitor

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | O |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | O |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | O |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | O | O |
| 5 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | O | O | O | O | O |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | O |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | O |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | O |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | O |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | O |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | O |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | O |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | O | O |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | O |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | O |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | N/A |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | N/A | O | O | O | O |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

Needs Wiper Blade — Replaced 5/13

**Employee Number:** 1176371

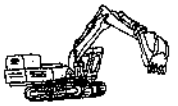
**Signature:** Chuck G Burns

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

EQUIP. NO. 55674

EQUIP. TYPE Track Hoe

ENDING HRS. 4984



Shaw Environmental and Infrastructure

# WEEKLY EQUIPMENT INSPECTION

***Note Quantities And Kinds of Fluids Added In Space At Bottom Of Sheet***

WEEK ENDING 5/22/09

SUPERVISOR S. Kittak

LOCATION Radford VA.

A=ADD O=OKAY C=COMMENTS

| ITEM | | SAT | SUN | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|
| 1 | Check Engine Oil Level And Engine Compartment For Debris, Engine Oil Leaks, Etc. | | | O | O | O | O | |
| 2 | Check Hydraulic Oil Level, Inspect The Cap And Vent. | | | O | O | O | O | |
| 3 | Check Radiator Coolant Level, Check Radiator Fins For Dirt, Leaves, Debris Etc. | | | O | O | O | O | |
| 4 | Check Transmission Oil Level (Dozers And Trucks) And Swing Case (Excavators) | | | O | O | O | O | |
| 6 | Check Oil Level In Frame Joint Bearing, Consult Operators Manual. (Volvo A-40 Only) | | | N/A | N/A | N/A | N/A | |
| 6 | Check For Leaks Of Any Kind, I.E., Oil Or Coolant. | | | O | O | O | O | |
| 7 | Check Wheels, Tires, Tracks For Damage, Cuts, Pressures, Broken Links Etc. | | | O | O | O | O | |
| 8 | Check Ground Engaging Tools, Look At Cutting Edge, Teeth, Blade, Bucket, Etc. | | | O | O | O | O | |
| 9 | Inspect Visible Hydraulic Hoses And Lines, Check For Scuffs, Leaks, Etc. | | | O | O | O | O | |
| 10 | Inspect Rops / Fops For Any Obvious Signs Of Loose Mounts, Broken Or Missing Bolts, Etc. | | | O | O | O | O | |
| 11 | Check All Guages, Lights, Controls And Backup Alarms, Horn, Etc. | | | O | O | O | O | |
| 12 | Inspect Operators Compartment For Cleanliness And Fire Extinguisher Charge. Check Floor For Build-Up Of Dirt Around Pedals, Or Any Loose Items. Inspect Seat And Seat Belts,Clean The Windows, Look For Cracks. | | | O | O | O | O | |
| 13 | Do A Walk Around Inspection For Any Obvious Signs Of Future Problem Areas. Check Grab Handles And Step Treads, Etc. | | | O | O | O | O | |
| 14 | Check Operation Of All Systems, Boom, Bucket, Blade, Dump Bed, Etc. | | | O | O | O | O | |
| 15 | Look Under The Machine For Any Loose Or Hanging Objects, Leaks Or Anything Out Of The Ordinary. | | | O | O | O | O | |
| 16 | Check Fuel Level, Fill Tank Prior To Beginning Operations. | | | N/A | N/A | N/A | N/A | |
| 17 | **Lube All Moving Parts Such As Blade, Bucket, Stick, Connecting Links, Equalizer Bar, Cylinder Pins And Any Point That Is Subject To The Grease Being Pushed Or Worn Out Due To Daily Use. Consult Manual For Grease Points.** | | | O | O | O | O | |
| 18 | Check Breathing Air System ( If Used ) Make Sure Bottle Is Full And Mask / Hose Assembly Is Clean And In Good Working Condition. | | | | | | | |
| 19 | **Ensure The Presence Of The Operations / Maintenance Manual.** | | | | | | | |

***REPORT ALL DAMAGE TO SUPERVISOR IMMEDIATELY***

**COMMENTS:** Please use line number and be specific. Notify your Regional Maintenance Coordinator of any items in need of immediate attention.

Hour Meter not working properly

**Employee Number:** 117627

**Signature:** Chad J Bass

***THESE SHEETS ARE TO BE RETAINED ON PROJECT FOR REVIEW BY EQUIPMENT GROUP PERSONNEL.***

RA-603 (REV. 7/05)

**RADFORD ARMY AMMUNITION PLANT**
**Alliant Ammunition & Energetics**
**Radford, Virginia**

Date 4-30-09

# AREA ENTRY PERMIT

(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to Shaw Environmental Inc.

Area of Work: Former Lead Furnace Area (North of 534)

Description of work to be performed: Soil Sampling, Environmental investigation ~~for~~ etc.

Special Precautions and/or Limitations to be followed: Keep vehicles off dry grass; check yourself for ticks

This permit is authorizing entry for the following period:

beginning 4-30-09 20 09 at 0700 a.m. p.m.

and ending 5-31-09 20 09 at 1600 a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

Matt Allen
Operating Department

T. M. Hollis
Safety Department

Matt Allen
Engineer

Steve Lovell
Contractor's Representative

**WHITE-SAFETY**
**YELLOW-ENGINEERING**
**BLUE- OPR. DEPT.**
**GREEN-SUBCONTRACTOR**

RA-603 (REV. 7/05)

**RADFORD ARMY AMMUNITION PLANT**
**Alliant Ammunition & Energetics**
**Radford, Virginia**

Date June 4, 2009

# AREA ENTRY PERMIT

(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to SHAW Environmental

Area of Work: Former Lead Furnace Area (near T-804 & Bldg S34)

Description of work to be performed: Excavation and Removal of lead contaminated soil in accordance with FPA/DBQ approved work Plan

Special Precautions and/or Limitations to be followed: Level D PPE specified in work Plan

Smart as needed

Emergency contact Security 540-639-7323

Contact Matt Albrecht or Jeremy Flint if needed.

This permit is authorizing entry for the following period:

beginning June 4, 20 09 at _____ a.m. p.m.

and ending July 31, 20 09 at _____ a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

Operating Department

Safety Department

Engineer

Contractor's Representative

**WHITE-SAFETY**
**YELLOW-ENGINEERING**
**BLUE- OPR. DEPT.**
**GREEN-SUBCONTRACTOR**

RA-604 Rev 1-98

# RFAAP, Alliant Techsystems, Inc.
## Subcontractor Hot Work Permit

12999

Location FLFA, North of 534 Bay # _____ Owner _____

Subcontractor Authorized Shaw Environmental

Devices to be used Portable welding machine; grinder

Scope of work (in detail) Repair cracks on the excavator's bucket.

Special Precautions _____

**Checklist** √ Appropriate conditions met for approval

| | | |
|---|---|---|
| ___ Combustibles 50' from Hot Work | ✓ Extinguisher on site | **Special PPE Required** |
| ___ Hot Work adjacent to combustibles | ___ Charged water hose | |
| ___ Combustibles covered | ___ Bldg Protection | |
| ___ Floor or wall openings protected | ___ Piping Protected | |
| ___ Conveyors/chutes protected | ___ Bldg posted | |
| ___ Vapors contained so not to enter | ___ Training complete | |
| ___ Fresh air required | ___ CSE required | |
| ___ Exhaust required | ___ Area to be kept wet | Model _____ |
| ___ Flashing required | ___ NG remover required | Row# _____ |
| ___ Floor swept clean of combustibles | ___ LEL Reading ____% | Last cal. _____ |

**Fire watch** ☐ Required ☐ Not Required

**Permit valid for the day(s) of** 6-30-09 **thru** 6-30-09

**For the time period** 0600 **to** 1400

Bank 443-553-9750

**Approval Signatures**

**Operating** Matt Alberto **Engineer** Matt Alberto

**Safety** _____ **Subcontractor** _____

White - Safety Yellow - Engineering Blue - Operations Green - Subcontractors

RA-603 (REV. 7/05)

**RADFORD ARMY AMMUNITION PLANT**
**Alliant Ammunition & Energetics**
**Radford, Virginia**

Date 4-8-2009

# AREA ENTRY PERMIT

(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to Shaw Environmental

Area of Work: FLFA ; Firing Line Furnace Area North of SD4

Description of work to be performed: Surface Soil Sampling of slopes surround FLFA

Special Precautions and/or Limitations to be followed:

This permit is authorizing entry for the following period:

beginning April 8th 2009 at 0700 a.m. p.m.

and ending April 9th 2009 at 1100 a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

Matt Abbott
Operating Department

Matt Abbott
Engineer

C Gabbard
Safety Department

Tim Kaiser
Contractor's Representative

**WHITE-SAFETY**
**YELLOW-ENGINEERING**
**BLUE- OPR. DEPT.**
**GREEN-SUBCONTRACTOR**

RA-603 (REV. 7/05)

# RADFORD ARMY AMMUNITION PLANT
## Alliant Ammunition & Energetics
## Radford, Virginia

Date 7-7-09

## AREA ENTRY PERMIT
(No Hot Work Is Authorized By This Permit)

This permit is strictly for the scope of work and limitations stated below and will not be expanded or deviated from by the personnel performing the work.

Issued to Shaw Env. Co.

Area of Work: Former Load Fence Area (North of 534)

Description of work to be performed: Environmental remediation

Special Precautions and/or Limitations to be followed: Yield to escorted vehicles

This permit is authorizing entry for the following period:

beginning 7-7-09 at 0700 a.m. p.m.

and ending 8-31-09 at 1900 a.m. p.m.

The work scope and job site have been inspected and are approved for the work as described above.

Operating Department

Safety Department

Engineer

Contractor's Representative

**WHITE-SAFETY**
**YELLOW-ENGINEERING**
**BLUE- OPR. DEPT.**
**GREEN-SUBCONTRACTOR**